Trains

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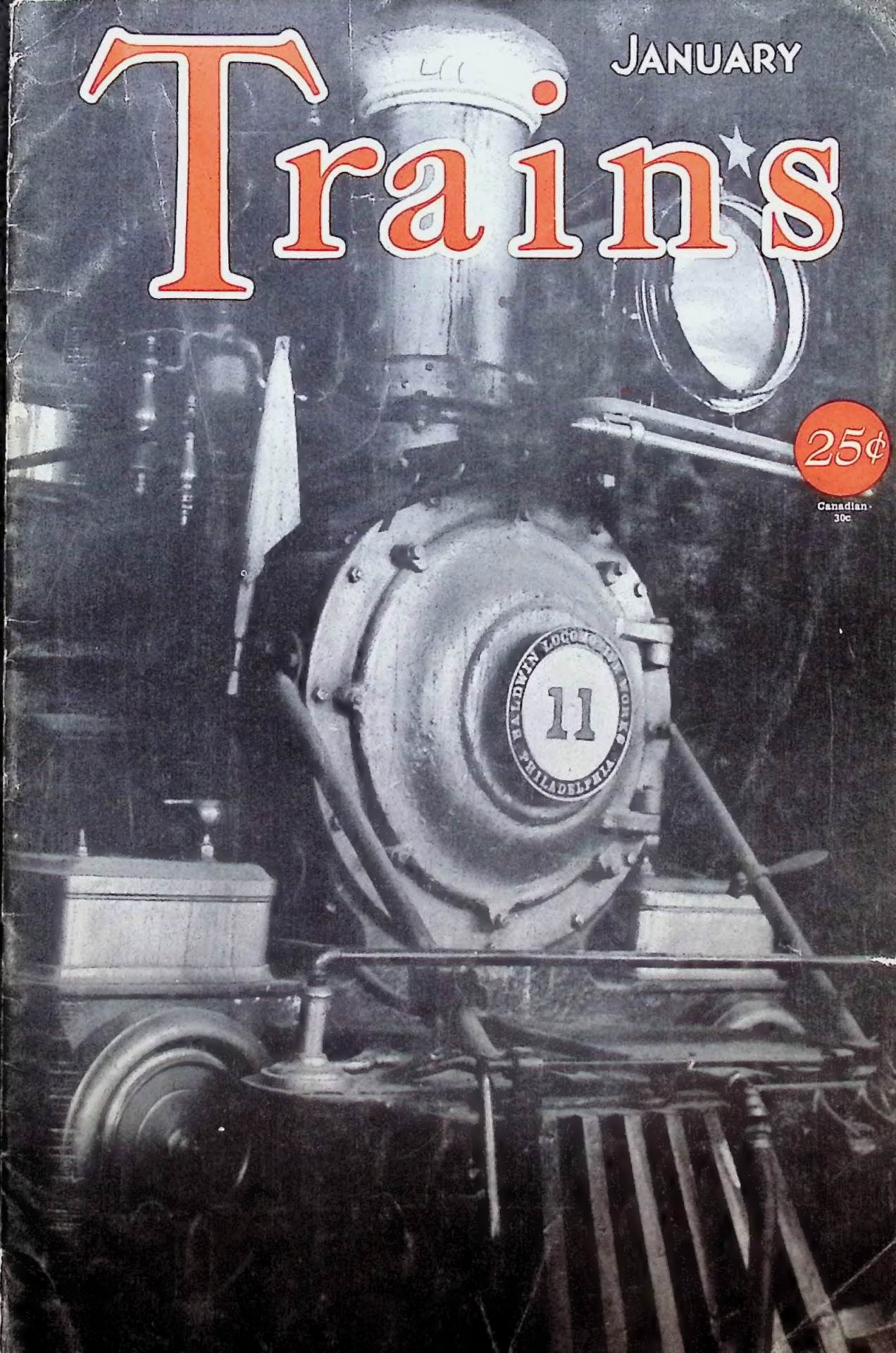

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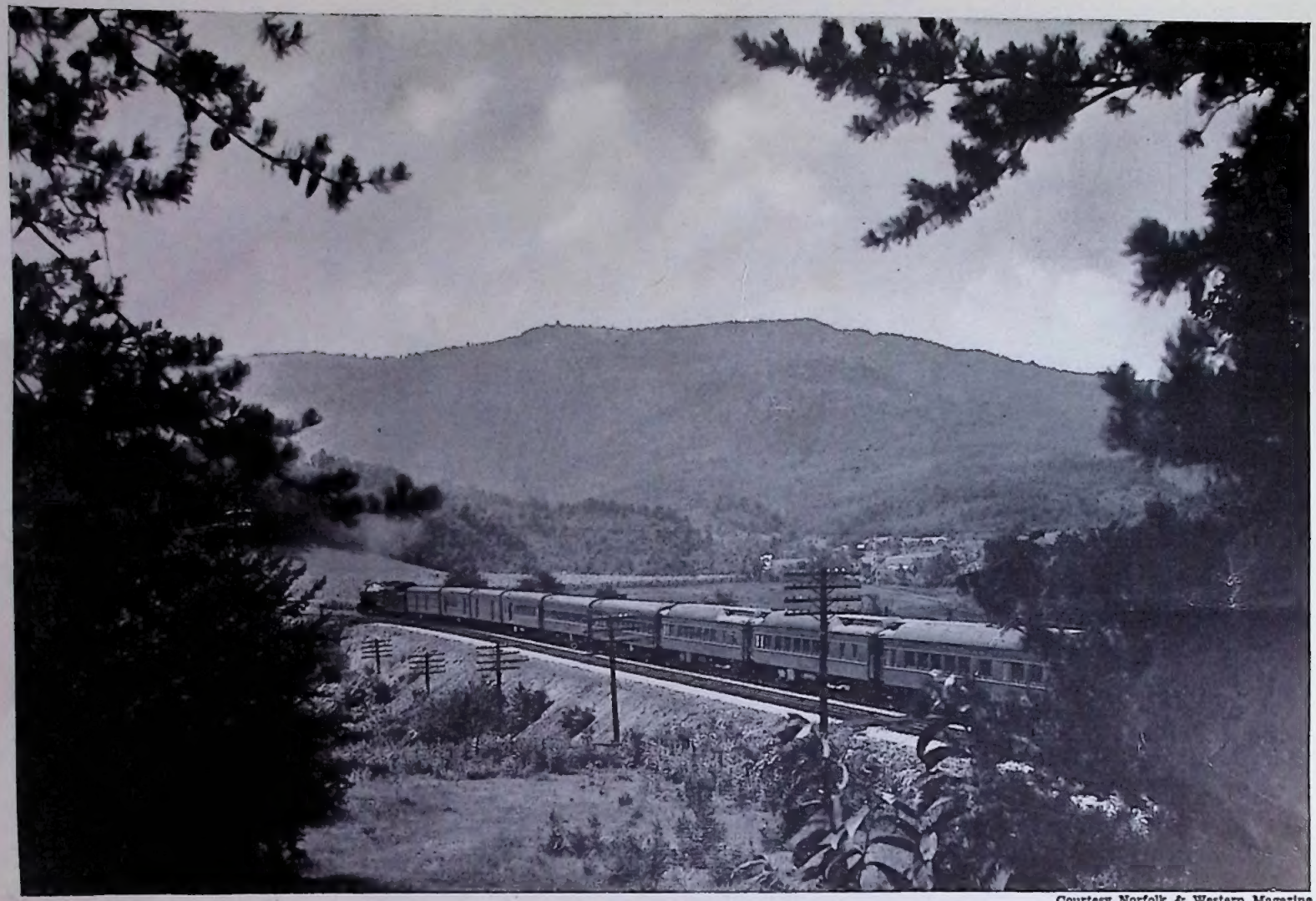

Courtesy Norfolk & Western Magazine.

Norfolk & Western's air-conditioned Pullmans cross the Alleghenies. Photographed between Glenvar and Singer, Va.

Waybills

Timetables are fascinating things. Sometimes they cause one to stay awake nights. For instance, how does the Arcade & Attica RR. get its equipment back to the north end? It runs two regularly scheduled trains southbound and one train northbound. And how about the Winston-Salem South Bound RR.—isn't there quite a collection at the south end?

The finest railroad map we've found for wall or reference purposes is the Ohman 28" x 36" United States map, printed in colors so as to show relief. All important railroads and most interesting secondary lines are plainly shown, and the relief makes it easy to visualize the dominant characteristics of each route. Copies can be obtained at $3.50 each from the Ohman Co., Memphis, Tenn.

The Michigan Central *Mercury* between Chicago and Detroit was a year old Nov. 12. *Mercury* passengers on that day were pleasantly surprised when given generous servings of cake and ice cream as part of the birthday celebration.

The annual railroad speed survey is presented in the January issue of *Railroad Magazine*. In recent years this detailed tabulation of all the mile-a-minute or faster scheduled passenger train runs in the United States has become an institution and is worth more than a casual reading by anyone interested in railroad passenger service.

TRAINS is nationally distributed and any newsdealer can secure it by asking his wholesaler. If your friends have been unable to find TRAINS for sale, suggest that they request their dealer to place an order with his distributor.

A. C. K.

Trains

Editors: A. C. Kalmbach, Linn H. Westcott, Willard V. Anderson

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Courtesy Baltimore & Ohio.

Dexterous chef masters tasty turkey.

Turkey is likely to be served any day on a modern dining car; one of the characteristics of railroad service is a good selection of fine foods at reasonable cost. This is the kitchen on a Baltimore & Ohio dining car. It is of necessity narrow since a passage must be allowed along the other side of the car for the use of passengers. Nevertheless the equipment is modern and as complete as in many of the finest terra firma restaurant-

Meals En Route

★ The inside story of dining car service on a typical trunk line railroad.

*By Lawrence W. Sagle.**

BACK in the "good old days," before we knew about air-conditioning, dining cars, and other things which are now so matter-of-fact on our railroads, a railroad journey was something to be born with rather than enjoyed; and not the least of our worries was "When do we eat?"

Most of those who traveled on the Baltimore & Ohio at the turn of the century will remember the sandwich and coffee man who would board the train at Point of Rocks and nonchalantly continue to serve the passengers after the train had started. At other places along the line, barefoot boys ran beneath the car windows selling fresh fruit from nearby orchards. And what a bedlam they would make with their shouting! But at Cumberland, where the railroad hotel was a part of the station (like the Fred Harvey houses along the Santa Fe), the train would stop for 20 minutes—imagine!—to allow the passengers to eat. As the train pulled in, a darky, in white coat, would appear on the veranda of the hotel and beat lustily on a large tray. Then there would be a mad rush to the dining room for a quick meal, and a dash back at the warning whistle, carrying, perhaps, a bad case of dyspepsia. Of course, there were many dining cars in service, but the wayside refreshment spots were still in vogue.

How different it is today! As we ride comfortably in our reclining seats, watching the scurrying landscape outside the sound-proof windows of our air-conditioned car, we are gently roused from our reveries by the three musical notes of the dinner chimes and the soft voice of the dining car waiter giving the call for dinner. We look at our watches. Of course! Time to eat. So off we go to the dining car—that marvelous, costly feature of every well known train.

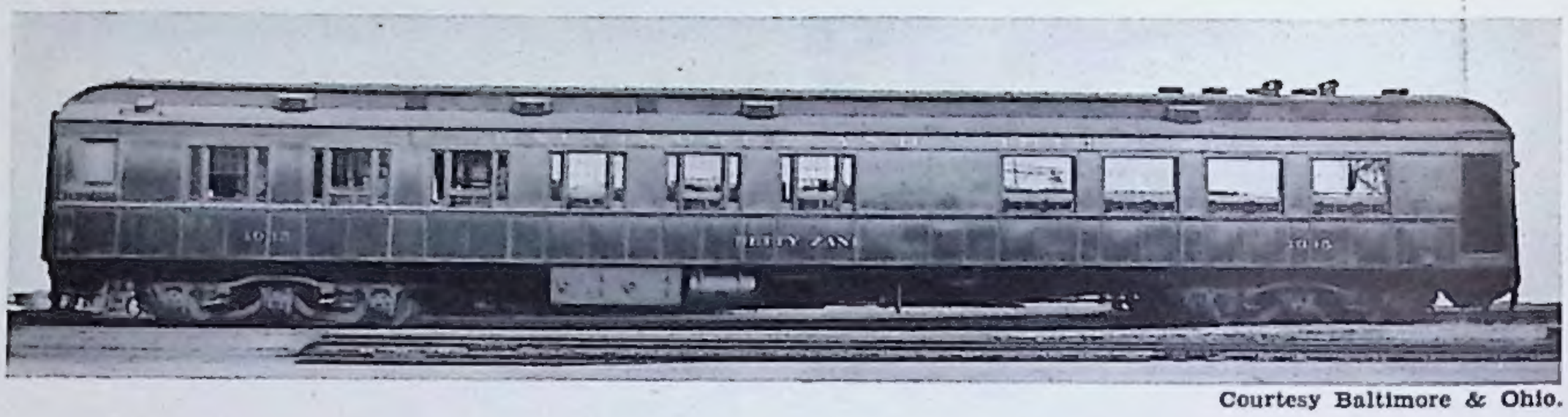
The steward draws back our chairs and hands us menus and order blanks. The waiter pours glasses of water. Now, what would our reaction be if, upon opening our menus, instead of the tasteful and dignified typography, there were a screaming red caption across the top reading "Bargain! Today only—$1.90 dinner for only $1.25"? Would we enjoy our meal more to know we were actually getting such a bargain? If so, we can enjoy it to the fullest extent. Here we are getting more than we are paying for, because every railroad operates its dining car service at a loss.

This will become apparent as we consider the scope and organization of the dining car department. A standard dining car is limited to an area of 9 x 80 ft. The part in which we sit is less than 40 ft. long, yet it comfortably seats 36 or more people. At the other end is the kitchen, with stoves, ovens, tables, sinks, ice boxes, cupboards, etc., occupying a a space about 16 ft. long and only 7½ ft. wide. There is a passageway for the passengers to get around it. A young bride in the tiny kitchenette of her small apartment has just as much space, but she probably feels that she has hardly enough room to prepare a good dinner for hubby. Yet in the small kitchen of a dining car three or more cooks work together in harmony. Next to the kitchen is the pantry, where the waiters prepare the trays.

We are speaking of a full-size, 80 ft. car. Some runs will not support a full-size diner, so we have the combination dining car and parlor car. We call them cafe-parlor or cafe-lounge cars. Then there are lunch counters at the ends of many reclining-seat cars and lounge cars. The B&O and Alton operate 42 large diners that seat 36 people, 8 that seat 30, 18 cafe-parlor, 4 cafe-club, 11 lounge, and 19 reclining-seat cars with dining facilities—a total of 102 cars on which food and drink may be purchased.

No space is wasted in any of these cars. Wherever it is possible to place a locker or cupboard, there we will find one. In the kitch-

*Public Relations Dept., Baltimore & Ohio RR.



Courtesy Baltimore & Ohio.

"BETTY ZANE" IS ONE OF B&O's 42 DINERS.

At the left end is a locker for linen and a small wash room. Behind the decorative windows are tables for 36 people. The kitchen and pantry are on the right end. There are no regular steps on this car.

en there is a large refrigerator with a capacity greater than we would expect. Here are kept fresh meats, fish, crab meat, oysters, shrimp, and such. Under the table are iced lockers for vegetables. There is a place for coal and coke for the range and broiler; immense water tanks are overhead, and double sinks provide ample water facilities. Over the table are bins for salt, flour, spices, etc. Above the range are warming ovens where rolls are kept hot after baking (yes, rolls, muffins, pies, etc., are actually baked on the car) and for keeping plates warm. There are also racks for pots, pans, and dishes, and lockers for towels, dish cloths and the like. In the kitchen of a full-size dining car there are more than 50 cooking utensils. The car also carries over 700 plates, cups, saucers, and miscellaneous pieces of china and crockery, and more than 300 pieces of glassware. The silverware amounts to about 600 pieces.

In the pantry are kept dishes such as salads, ices, fruits, ice cream and other foods not prepared in the kitchen. There are cupboards for canned goods, cereals, codiments and the like. There are 145 pieces of equipment in the pantry, where the waiters prepare the dishes. It is the waiter, not the cook, who puts the final touch to the dishes he serves. And, as there is no scullery maid, each waiter washes his own dirty dishes and replaces them in the racks.

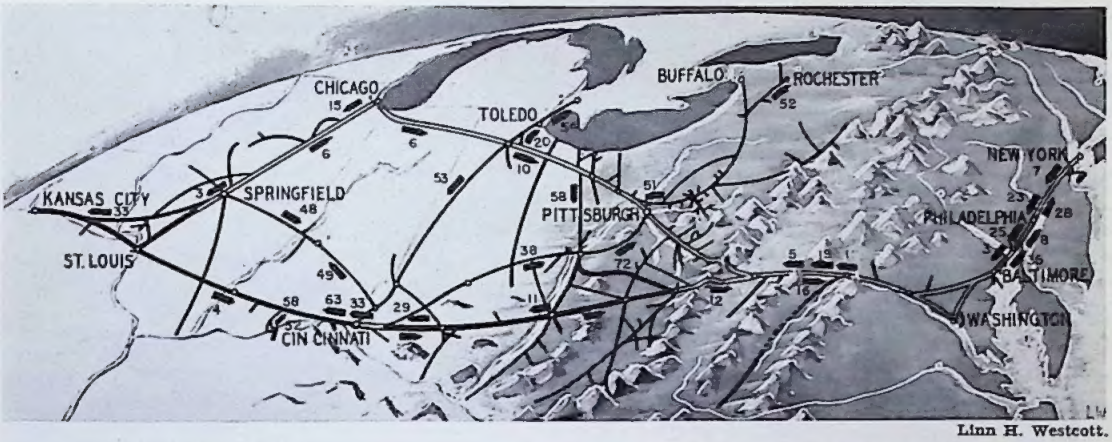
Outside the pantry, on the kitchen side of the passageway, is a large iced locker for fruits and vegetables. Across the aisle is the linen locker. There are more than 1100 pieces of linen assigned to a dining car.

At the opposite end of the car from the kitchen are more lockers. Here the steward keeps beer, liquors, mineral waters, cigarettes and cigars. Beverages must be kept cool so there is a refrigerator at this end also. And there is still room here for the machinery which keeps the car comfortably cool and makes dining a pleasure the year around.

In service on these cars, most of which are the famous colonial diners, are a steward, six waiters, and three cooks. On some trains, such as the *Capitol Limited,* there are as many as four cooks and eight waiters. Long before we sit down to order dinner, this crew has been busy with preliminary preparations. The menu has been checked over by the steward, the chef, and the pantry man. The club plate dinner has been planned and inserts for the menus written. The chef and his assistants have started cooking the soups, baking rolls and muffins, and preparing other things which can be cooked in advance of orders, and the pantry man has arranged things for salads, desserts, etc., so that everything will go smoothly when service begins.

The duties in the car are divided among the waiters in seniority order, the pantry man holding highest honors. One of the waiters is assigned as assistant pantry man, one has charge of the linen, another the silver and glassware, and another is responsible for the cleanliness of the car.

When it comes to tips, does one waiter get more than another? Hardly. The boys on the diners have worked this out to a neat science, with the aid of the stewards. The steward knows about how many meals each of his waiters has served, and attempts to seat a newcomer at a position in the car where the waiter serving there is due for a customer. Now that seat might not just suit the patron, who expresses a preference for a seat two tables down the car, on the opposite side. He won't be cheating the waiter out of a tip, for the waiter who serves the table which was



Linn H. Westcott.

DINING CARS ON THE B&O AT 6 P.M. (C.S.T.) SERVE ALL THE SYSTEM.

Dining service must be planned as thoroughly as a timetable. Wherever people are they must eat, and B&O managers see to it that all important trains have adequate service. Black arrows on this map show each car in service at 6 p.m. C. S. T. (7 p.m. E. S. T.); the number of the train in shown beside the car. Between New York and Washington you may eat on the *Shenandoah, West Virginian, Columbian, Royal Blue, Diplomat,* or the *Philadelphia Express.* Planning this service not only means getting diners on the proper trains, but involves the vast problem of keeping these cars well supplied with all the things to eat. At various points on the line are stores where the cars are stocked and where linen is washed and ironed. All diners must return to these points periodically, and occasionally a car goes to the shops for checkup and general upkeep to insure safe, comfortable travel.

declined will serve regardless. The waiters on some cars pool their tips, but this is seldom done.

On some of the cars, on heavily traveled trains such as the *Capitol* and *National* limiteds, is a waiter who does not serve but makes himself generally useful, changing linen, filling water glasses, bringing extra butter, and clearing away dishes. This is the "upstairs man" or "swing man," and he won't be seen in the morning, as he will get off at a division point after the last guest has been served. He is not only a great help to the crew in keeping things moving, making it possible to seat passengers faster, but he also permits the waiters to serve more meals, with a proportional increase in tips. For this the waiters give him a percentage.

The chef and other cooks never receive tips or any portion of them, unless the guest specifically requests it. Their salaries are correspondingly greater.

How is it possible to provide the variety of dishes served on a standard diner? The menu gives a choice of either table d'hote or a la carte service. On the $1.25 dinner, to select a menu at random, there is a fresh shrimp cocktail as a starter. Then there is a choice of two kinds of soup. There are chilled celery and melon mangoes. For the entree one may have panned fresh fish with parsley butter, an imperial crab with cole slaw, saute of calf sweetbreads with Canadian bacon, half a fried chicken Southern style, roast leg of lamb with mint jelly, or assorted cold cuts with potato salad. A broiled sirlion steak would take the cost of the dinner to $1.75.

Then there is the choice of two or three vegetables. There are potatoes au gratin, fresh garden peas with parsley butter, and green corn on the cob. The salad for the day is hearts of lettuce with thousand island dressing. One may have hot potato rolls or ginger muffins (both baked on the car), or sliced bread. For dessert there is a choice of green apple pie, ice cream with wafers, or cheese and crackers, and there are at least four kinds of cheese from which to choose. Beverages include tea, coffee, Sanka, Kaffee Hag, Instant Postum, cocoa, malted milk, milk, and buttermilk. Maryland mountain resort water is used exclusively on B&O diners.

The foregoing is the table d'hote menu on one train for one day. It may be different on the same train the next day, or on other trains the same day, but is given as an example of the wide variety of foods offered. In the a la carte service on the same menu there are varieties of sandwiches, salads, cold cuts,

etc., using additional items other than those shown on the table d'hote dinner. Then there is the daily club plate service which includes an appetizer (such as soup or tomato juice), choice of entree, two vegetables, beverage, and dessert.

Truly a variety sufficient to tempt the appetite of the traveler of small or large means!

To provide such a variety requires considerable forethought and planning. Unlike a restaurant, the dining car steward cannot send out a rush order to a butcher or greengrocer when he finds that his customers are making a run on some particular dish on the menu. Only experience teaches him just how much of each thing he must order in advance so that he will not be embarrassed by having to tell a person that he can't have something that is on the menu.

The main dining car commissary of the B&O is located in Baltimore, with branches in Cincinnati and Chicago. Let us take, for an example, a car running from New York to St. Louis. The steward, on his eastbound trip, makes a requisition for the supplies that he will pick up in Baltimore as he passes through on the westbound run. He also wires a requisition to Cincinnati covering the supplies he will pick up there as he passes through, in both directions. In determining what is needed, the steward sits down with the chef and pantry man and they inventory the supplies on hand and then make requisitions according to what they have determined will be needed.

In the Baltimore commissary each morning at 5 o'clock, the commissary storekeeper takes all of the requisitions received during the night and goes over them carefully, abstracting the various items into totals of pounds of meat, fish, vegetables, etc. Each month approved dealers submit bids for supplying certain items of foodstuffs, the monthly contract being let to the lowest bidder—quality, of course, being the first consideration. When the storekeeper determines just what he needs, he telephones the suppliers and in short order he has sufficient supplies to fill the requisitions.

For cars operating through Baltimore, the orders are made up in cases and hampers, and the supplies are put on when the trains stop at Camden Station, the B&O's downtown station in Baltimore. For cars not touching Baltimore, supplies are rushed by the first passenger train to points on the system where the cars can be stocked. Special water-tight hampers, properly iced, in which perishable foods may be shipped safely are provided for the purpose. Canned goods and the like are also shipped in special hampers, but not iced.

Cars operating on the western part of the system receive their shipments from Cincinnati, where the same procedure is followed, although on a smaller scale than at Baltimore. The Chicago commissary supplies cars of the Alton RR. and the B&O cars operating into Chicago.

Cars operating through Pittsburgh, Buffalo, Rochester, Wheeling, Columbus, Parkersburgh, and on other cross lines must order from the nearest commissary and receive their supplies in the iced hampers. If it is necessary, due to unforeseen circumstances, the steward has authority to buy emergency supplies en route or at the end of the run, such as at St. Louis or Jersey City. When special parties, tours, etc., must be accommodated, the passenger department notifies the dining car department sufficiently in advance so that regular or extra cars can be stocked to take care of the anticipated demand.

Fresh water fish from the Great Lakes are served on Alton and eastbound B&O trains. Westbound, the B&O diners serve salt water fish from Chesapeake Bay. Crab meat and oysters, in season, are also from the bay.

The amount of perishables consumed is staggering. In one month the B&O purchased 3712 pounds of bacon, 22,316 pounds of beef, 11,253 pounds of fowl, 5432 dozen eggs, 15,167 pounds of fish, 8900 pounds of ham, 1326 pounds of lamb legs, 1024 pounds of shrimp, and 2226 pounds of turkeys. And that last item wasn't in December, as you might think, but in June. The average money value of foodstuffs purchased for B&O dining cars is about $50,000 monthly. Ice and fuel each month cost about $3000; mineral waters, beer, wines and liquors, $3000; cigars, cigarettes, candy, magazines and playing cards, $1200.

Then there is the item of laundry. The bill amounts to between $5000 and $6000 monthly. Clean table cloths, napkins, waiters' coats, aprons, etc., are a prime necessity. Laundry bags containing soiled linen are put off at Baltimore, Cincinnati, Chicago, and St. Louis.

Replacements run into considerable money. In one month picked at random we find that

Courtesy Baltimore & Ohio.

THE LUNCH COUNTER STREAMLINES FOOD SERVICE.

For a quick snack or even for a large meal the convenience of the lunch counters on modern high speed trains has done its part in making railroad travel popular. Here food is served directly from kitchen to customer in a clean, modern and airy car. Liquid refreshment is served in conformance with state laws. Lunch counters are usually only a portion of a lounge car. This one is on B&O's famous *Royal Blue* train.

the replacement of pantry and kitchen utensils cost $1133. Crockery and glassware replacements amounted to $1594 and silverware $632. And then there is the item of repairs to linen. A careless person burns a hole in a table cloth, or a cook's coat gets torn. However it happens, the bill for repairs to linens, and for replacements, amounts to about $3000 each month on the B&O, although most of the repairing is done by a seamstress employed full time at the Baltimore commissary.

Expenses, expenses, expenses! That seems to be the one big thing staring the dining car department in the face at all times. Take liquor, for instance. The dining car must furnish its patrons with cocktails and liquors with their meals if they so desire it, and the highball or bottle of beer between meals, or the after-dinner cigar or the pack of cigarettes which the patron forgot to buy in his last-minute rush to catch the train. That means license fees in each state in which the railroad operates, with sales restricted to conform to the law of whatever state the train is in at the moment. The B&O pays annually for liquor, restaurant, soft drink, cigar and cigarette licenses $1675 to the federal government, $100 to Delaware, $150 to Illinois, $225 to Indiana, $150 to Maryland, $150 to New Jersey, $50 to Ohio, $1446 to Pennsylvania, $60 to the District of Columbia, and $2370 to West Virginia. Quite a tidy sum each year! And the usual beer and liquor taxes are paid each month in those states that require them.

Liquor laws, at times, result in embarrassing situations for the stewards. Occasionally a tardy passenger wanders into the diner just after the train has passed over the Potomac

River at Harpers Ferry. Seeing a cocktail on the table across the way (which was purchased while the train was still in Maryland), he feels the urge to have one. He is very much put out when told he can have nothing but beer in West Virginia. This condition is duplicated on the lounge cars, and there are times when the passenger roundly berates the railroad rather than the lawmakers of the state in which he is traveling at the moment.

The Dining Car Personnel.

The various types of cars in operation require a total personnel of 45 stewards, 194 cooks and 332 waiters, all especially trained for their jobs. All must be provided with meals and sleeping quarters while in transit. On the long runs, where dining cars are carried through (to save the necessity of switching in the night and thus disturbing sleeping passengers), sleeping quarters for the crew are provided in dormitories in the combine car forward. On trains like the *Capitol* and *National* limiteds there are beds for 12 men with private washroom and toilet facilities.

All men in the dining car service must be examined by company physicians every 60 days and are required to carry their certificates with them at all times. To safeguard the health of the men, the company provides them with suitable hotel accommodations at the away-from-home terminal. Each crew has a home terminal, where they usually establish their homes. It costs the B&O about $1300 monthly to provide away-from-home quarters. The company also serves about 20,000 free meals monthly to its dining car crews.

Men in regular service on cars are guaranteed 240 hours of duty each month and are given four days off in every 30. The average mileage of a B&O dining car is 12,000 each month.

On the smaller cars, such as cafe-parlor cars, which have a seating capacity of 18 in the dining compartment and carry a crew of four men, much the same variety of food can be obtained as on the larger diners. These cars are managed by a "waiter-in-charge" instead of a steward. Such cars are attached, mainly, to cross-line trains where the patronage would not support a full-size dining or chair car, and they provide both of these types of service.

The dining car departments of most railroads, mindful of the fact that many passengers prefer not to eat a full meal and therefore hesitate to go to the dining car, send waiters through the coaches before and after rush hours with sandwiches, coffee, soft drinks and ice cream. This service has proved to be very popular and adds to the revenue of the dining car departments to some extent. The waiters get 5 per cent of the receipts from coach sales, and take the assignment in turn.

On the buffet-lounge cars of the *Capitol* and *National* limiteds, passengers may obtain ample meals at prices lower than charged in the regular diners. This is a feature primarily for coach pas-

Courtesy Baltimore & Ohio.

TRAINED FOOD SPECIALISTS STOCK THE LARDER OF A B&O DINER.

Vegetables must be of the freshest and finest varieties. It has taken years of experience to learn how to serve the best of foods from the smallest of kitchens on a fast-moving train.

sengers traveling on a limited budget. The buffet is managed by a waiter-in-charge, assisted by a cook and a waiter, whose duties, besides serving meals and refreshments, require them to look after the welfare of passengers in the reclining-seat coaches, the rental of pillows, etc. On the 11 lounge cars operated by the B&O, the service consists chiefly of liquid refreshments, although a variety of sandwiches can be obtained.

On the 19 reclining-seat cars equipped with refreshment counters, the coach passenger may purchase sandwiches, tea, coffee, milk, soft drinks, etc. The porters in charge of these cars are under the supervision of the dining car department, and it is in these cars that the rental of pillows at 15 cents each brings in a revenue of about $1500 a month. These cars take in approximately $2400 monthly for light meals, $500 for cigars, cigarettes, candy, cards and magazines, and more than $600 for soft drinks. All this helps to reduce the deficit, as these cars come nearer to breaking even than any other service performed by the department.

But enough for statistics! We don't have to worry about them. All we are interested in is getting a good meal when the call comes. And the B&O, like the other great railroads of the country, maintains this service to make our trip a pleasant one. Like a great hotel on wheels, the limited rushes across the country. The passenger is the honored guest, and nothing is too good for him.

Steward Has a Hard Job.

The steward's job is no bed of roses. His is the soothing voice—the soft answer that turns away wrath. And his is usually a kind heart. He often has brought to his attention cases of worthy people without funds, like the woman with three children who had spent her last dollar for rail fare. In that instance the steward dug down into his own pocket and sent food to them. And once a minister on a train called attention to a woman passenger who was ill—and hungry—and the steward, like the hand of God, provided. But don't try to pull a "fast one" on him, because it won't work. He is a keen student of human nature and can see through a scheme faster than one can think of it. One steward tells of a man who rushed into the diner and asked for a pot of coffee. With a straight face he told the steward that he had finished his dinner an hour past, but had told the waiter that he would be back later for his coffee. He paid for it.

The steward must be a walking bureau of information. What is the best train connection at Chicago? What is the name of a good hotel in Detroit? What are the most interesting points on the line? Who do you think will win the third race at Laurel?

The steward must also be an accommodating soul. He will do anything in reason to help the passengers. Take the case of mothers traveling with babies. He will prepare the baby's feeding formula as furnished by the mother, and deliver the bottles to her on schedule. If someone has some favorite fruit, vegetables, sea food, or the like, which he wants to take home because he can't get them in his part of the country, the steward will put them in the car's refrigerator and deliver them cold and fresh at the journey's end. Perhaps a fisherman wants to show the boys at home the "big ones" he caught up in the lakes. The steward will care for them, and he won't serve them to his patrons, either! And that corsage that friends gave you as you were leaving? It would break your heart to have it wilt and die before you got home. Don't worry—the steward will put it on ice for you and it will be as fresh when you step off the train as when you got on. But don't ask him to serve a drink contrary to the laws of the state in which the train happens to be at the time. You will find his devotion to duty as strong as his heart is soft.

Long after you have left the diner and have decided you might just as well retire for the night, if you will peep into the dining car you will see a beehive of activity. The chef, pantry man and steward will be huddled together making up the requisition to be rushed to the commissary; the cooks in the kitchen will be polishing up pots and pans and getting things in apple-pie order for the next day. The assistant pantry man will be fixing things up in his department, while other waiters will be polishing silver, making up the laundry bag and thoroughly cleaning the car. And not until all of this is done will the men dim the lights and go to the dormitory for a well-earned night's rest, only to be up bright and early the next morning to get into fresh coats and aprons and, with the tables gleaming with shining silver and spotless cloths, greet you for breakfast.

Gulf, Mobile & Ohio

★ A railroad is born, or the story of how two companies met competition by merger.

THE lines of the Gulf, Mobile & Northern and of the Mobile & Ohio were roughly parallel all the way from Mobile, Ala., to Jackson, Tenn. This is a distance of about 300 miles, and the lines were separated by about 25 miles most of the way. Originally lumber was the chief source of revenue for the two companies. In the twenties the forests became exhausted due to bad lumbering methods, and at about the same time highway competition set in. I. B. Tigrett, president of the GM&N, studied the problem and concluded that parallel small railroads would be wiser to consolidate than to continue to compete.

This was a rather new but wise conclusion. In the early days of railroading competition between roads was considered desirable, since railroads were the mainstay of transportation. Now, with other forms of transportation—buses, trucks, barges, interurbans, perhaps even airways—railroads no longer need to be in competition with each other.

With this idea in mind, Tigrett started working toward a merger between his road and the Mobile & Ohio. It was not as easy as one might think. The M&O belonged in part to the Southern Ry., the GM&N was partly controlled by the Burlington, and neither of these large systems was particularly interested in the idea.

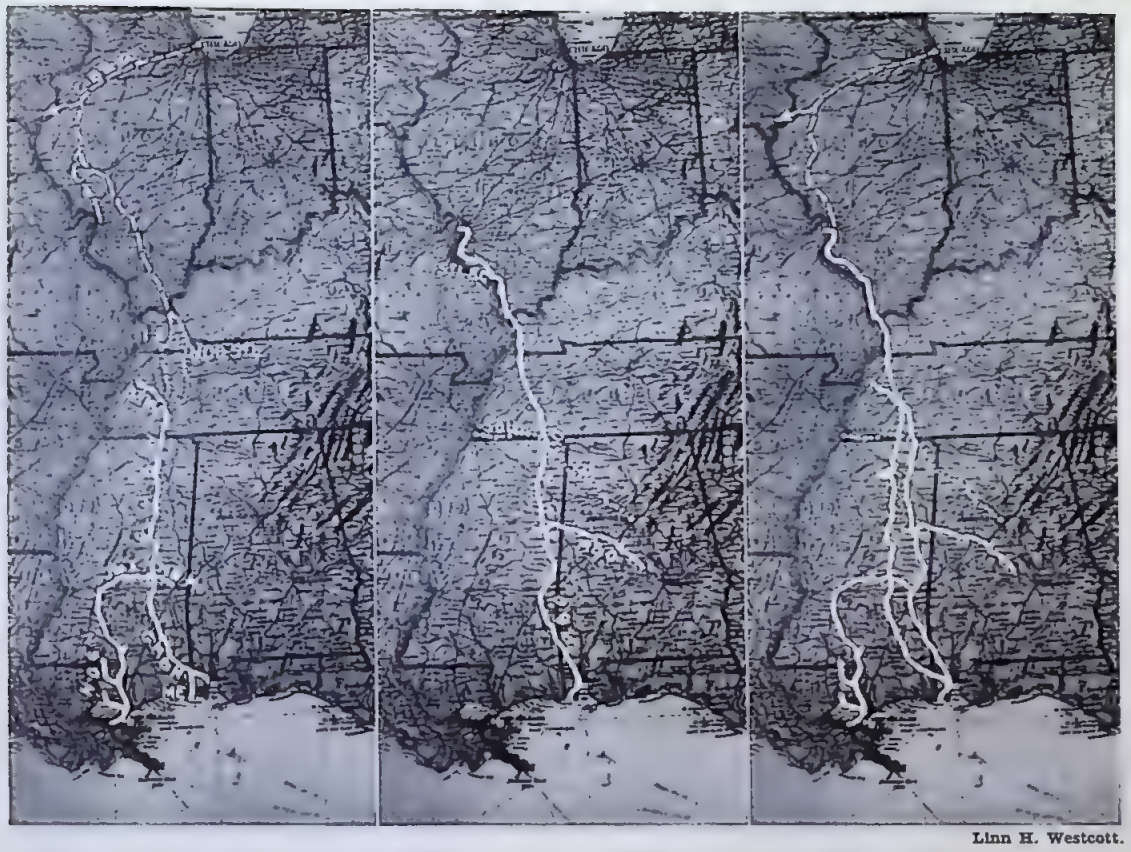
Many times it seemed as though the plans would fall through, and then the Transporta-

Growth of Tigrett's Gulf, Mobile & Northern RR.

1889 Mobile, Hattiesburg & Jackson RR. formed as outlet for Mobile, Ala. System grows by leasing of Gulf & Chicago, becoming the Mobile, Jackson & Kansas City. Acquires Kingston & Central, extends to Newton.
1906 Extends to Middletown, Tenn.
1909 MJ&KC and G&C sold to New Orleans, Mobile & Chicago.
1916 NOM&C sold to new Gulf, Mobile & Northern.
1919 I. B. Tigrett, of the Birmingham & Northwestern (since 1911) becomes president of GM&N.
1922 Meridian & Mississippi acquired.
1926 GM&N uses Nashville, Chatanooga & St. Louis tracks to Paducah, Ky.
1927 Jackson & Eastern bought and extended.
1928 Chicago, Burlington & Quincy gets partial control. Attempts to connect with GM&N by extending its lines to Paducah.
1930 New Orleans Great Northern leased. Gives line to New Orleans.
1933 NC&StL trackage discontinued, Illinois Central used instead.
1938 IC employees insist upon running GM&N trains on IC tracks. Trackage rights discontinued on IC. Freight to North turned over to Mobile & Ohio at Jackson, Tenn., for East St. Louis, Ill.
1940 Merges with M&O, forming Gulf, Mobile & Ohio.

History of the Mobile & Ohio RR.

1848 Born at Mobile, Ala.
1849-1861 Completed to Columbus, Ky.
1861-1866 Civil War destruction. 184 miles of track ruined.
1866-1870 Reconstruction.
1870 Aberdeen branch, Muldon to Aberdeen, 9 miles.
1875 Branch, Artesia to Starkville.
1875-1883 Into receivership, reorganized without a sale.
1882 Cairo extension to the Ohio River.
1886 M&O leases the narrow gauge St. Louis & Cairo, rebuilds it; forms through route, Gulf to St. Louis.
1898 Extended to Montgomery, Ala.
1901 Southern Ry. gets control.
1906 Trackage rights via Illinois Central to Birmingham, Ala.
1932 Trackage rights via S Ry. to Memphis, Tenn.
1940 Merges with Gulf, Mobile & Northern, forming the Gulf, Mobile & Ohio. No longer under S Ry. control.



Linn H. Westcott.

GM&N + M&O = GM&O; IN NUMBERS THERE IS STRENGTH.

These maps show graphically how the Gulf, Mobile & Ohio was built from its two parent companies. At the left is the GM&N, showing by initials the names of the lines which made it up. In the center is the M&O system, and on the right the new combined network. The dotted lines are lines of other railroads used at one time or another by GM&N or M&O trains. The dashed lines are those of the Chicago, Burlington & Quincy, which once had its eye upon the GM&N and still handles much of the traffic beyond St. Louis.

tion Act* was introduced into Congress. Its passage would mean doing all the planning over again. It was a race against time, and a close one at that. Finally, on Sept. 13, 1940—a Friday—the plans were completed before the passage of the act.

This new system reaches from New Orleans and Mobile, on the Gulf of Mexico, to Cairo and St. Louis in the central Mississippi Valley. It will be interesting to see how the traffic on the two parallel main lines is handled after several months of operation under the new plan. At the present time all trains previously run by either railroad are still in operation on virtually the same schedules, except that the Starkville branch has only one train each way in place of two [since the branch is only 11.3 miles long, the change is significant mainly to the patrons of the branch] and while two trains previously ran from St. Louis to Mobile on the M&O line, one of these now terminates at Meridian.

In the Interstate Commerce Commission's plan for consolidating the railroads into several great systems, the M&O was to go to the Chicago & North Western and the GM&N to the Atlantic Coast Line groupings. The permission to let the two amalgamate indicates that plans made by the I. C. C. may be subject to amendment, a rather significant fact if the I. C. C. groupings are to be carried out.

At the St. Louis end the GM&O is following the new trend to keep terminal expenses down. Instead of using the Union Station, the railroad has built a new terminal at Trendley Ave. in East St. Louis, and from this it reaches to downtown St. Louis, the Union Station, and other parts of the city by Greyhound coach without additional cost to passengers.

*See "This Month," TRAINS, Dec. '40.

Courtesy Canadian National.

Victoria Bridge is historic.

Victoria Bridge connects Montreal with the southern side of the St. Lawrence River. The modern truss bridge spans were built on the stone piers that carried the original tubular spans built in 1860 (below). This bridge carried trains through wrought iron tubes which seemed like a tunnel to the passengers. It was opened by the then Prince of Wales. The bridge rises gradually toward the center, and passes highway traffic as well as the trains of the Canadian National to Quebec City on the north side of the river and to Nova Scotia, New York, and other points on the south side.

Courtesy Canadian National.

Canadian National Bridges

★ Without bridges our modern methods of transportation would be utterly impossible.

*By Harry Klug.**

When you throw a plank across a little stream or perhaps from the curb to the street on a very rainy day, you build a bridge. An explorer builds a bridge with no tools other than an axe when he fells a tree across a stream or a gulch which blocks his path. These primitive bridges, built with materials close at hand, have helped man move from place to place, city to city, and country to country since long before the days of recorded history.

In the olden days the ability of a bridge to carry the required load was a matter of luck or chance. With time and experience it became easier and easier to estimate just how big a log must be used here, how tough a vine there, or how best to pile the blocks of stone to make a substantial structure.

A modern bridge is a structure built to permit safe and easy passage over a river or other depression that might otherwise be difficult or impossible to cross. Bridges play a vital role in modern transportation, particularly since they are often the bottleneck of a long chain of highways or railroads. Without large bridges there would be no Canadian National or Pennsylvania or Union Pacific or other systems. They would be bounded by the rivers and gorges they now cross on bridges.

Modern bridge building was made possible with the introduction of fine alloys of iron and steel and through the use of mathematics. Since a large bridge weighs much more than the load it carries, the load is considered almost insignificant. With a smaller bridge the load may be the primary item of consideration. Trial and error has now been superseded by the use of accepted practice, and if experimentation is to be done it is with models of plastics under laboratory conditions.

A modern railroad has many bridges. Place all of the spans of the Canadian National Rys. end to end and they would extend well over 150 miles—the equivalent of a bridge the full length of Lake Ontario. This is an example from just one of our great railroads.

On the Canadian National, structures less than 18 ft. long are classified as culverts instead of bridges. Of these, there are more than 150,000, two and a half culverts for every mile of track.

Among the best known bridges of the Canadian National is the famous Quebec Bridge, which spans the St. Lawrence River near Quebec City. It is a cantilever bridge—that is, a type where the sections over each pier are balanced side for side. A small, practically independent bridge in the center connects the two cantilevers, and the land end of the cantilevers is anchored to prevent rocking up or down. This bridge is 3239 ft. long and carries the track 164 ft. above water level. It connects the land south of the river with Quebec, and over it pass most of the CNR trains between Montreal and Quebec.

This bridge is on the site of the partially completed one which collapsed decades ago when one of the main oblique girders near the base buckled. During the construction of this second bridge there was another less disastrous accident when the center span was lifted into place. As it neared its position one of the cables from which it was suspended broke and the center span took a dive into the river. In its present form this bridge is an excellent example of good cantilever type construction.

Near Montreal the river is very wide and not so deep. Here the famous Victoria bridge was constructed in 1853 (completed in 1859). The first spans were wrought iron tubes, 254 ft. and 354 ft. long. Trains ran through them just as they would go through a tunnel. In

*Adapted from an article by R. O. Stewart, assistant engineer, CNR, in the *Canadian National Magazine*.

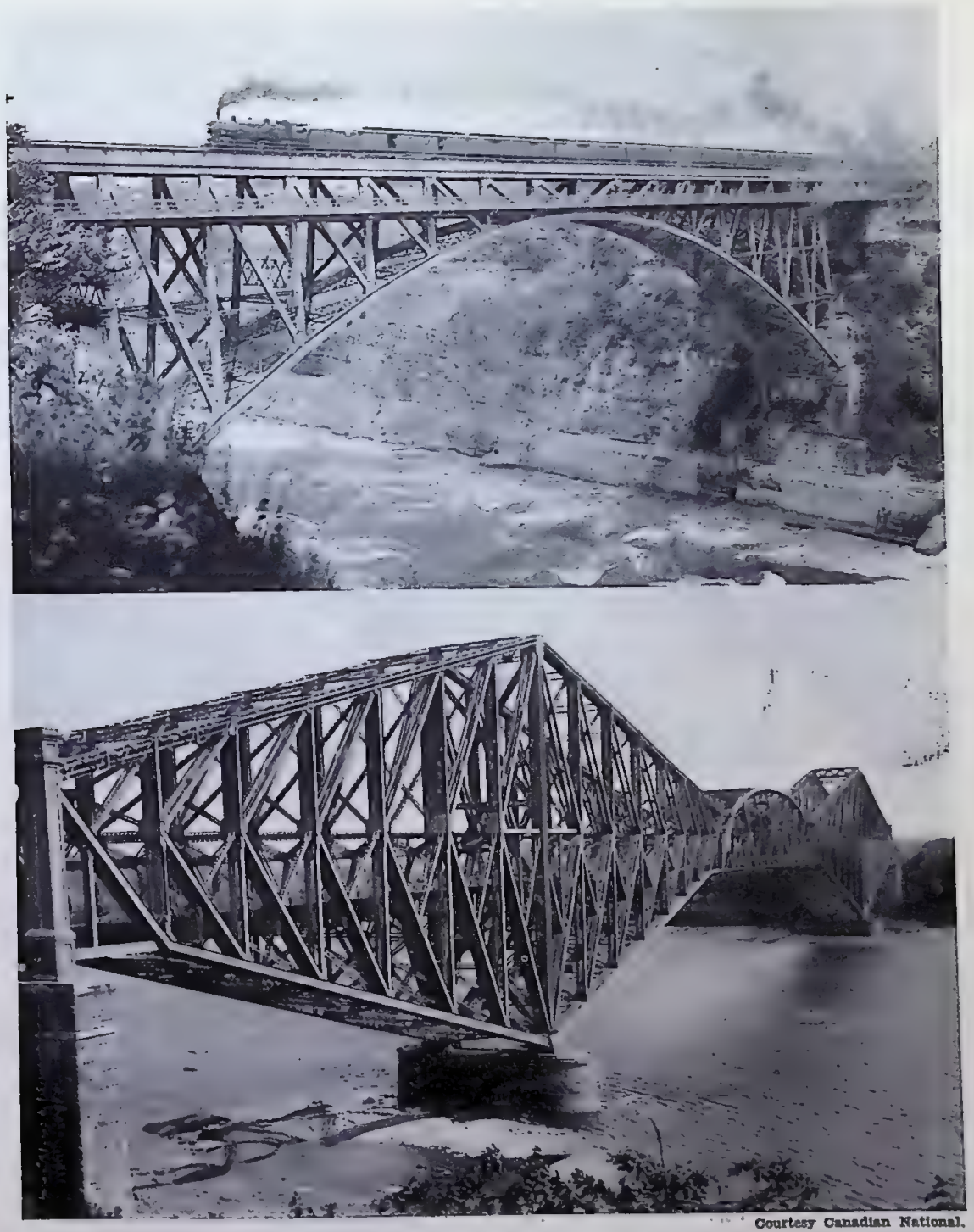
Courtesy Canadian National.

A Drawbridge Must Pass Two Kinds of Traffic.

Here is a Canadian National bridge over the Lachine Canal, in Montreal. In the upper picture it is set for the railroad; below, to pass a ship carrying paper for the news industry. A drawbridge is an expensive item of railroad structure. It requires almost constant upkeep and maintenance, and must have a bridgekeeper at all hours. To open many drawbridges the cost is $15, $20, or more, and the boats which pass through rarely have to pay anything for the service. At the bottom is one of the few remaining timber trestles on the Canadian National. This one is at Big Eddy, in Alberta. Trestles eventually become buried in a fill.

1899 the present steel trusses replaced the original tubes, but the masonry work of the piers is still the original. Over this bridge pass the same trains that use the Quebec Bridge between Montreal and Quebec, as well as the traffic from Montreal to New York and Washington by way of the Central Vermont, and the trains to Nova Scotia.

Crossing the Niagara Gorge are many beautiful and famous bridges. That of the Canadian National is an arch which also carries a highway, 1082 ft. in total length, the



Courtesy Canadian National.

THESE BRIDGES ARE FAMOUS.

Above is the Niagara arch bridge supporting an important branch of the CNR above the gorge. Below the bridge can be seen the tracks of the now abandoned electric scenic railway. The train consists mostly of express cars bound for Canadian points. In the photo at the bottom is the cantilever type Quebec Bridge, the history of which was recalled by the collapse of the new highway bridge at Tacoma, Wash., in November. This also collapsed, but before completion. It was redesigned before the structure was rebuilt.

Courtesy Canadian National.

TWO RAILROADS TIE KNOTS OVER THE FRASER RIVER.

The arch bridge above takes the main line of the Canadian National over the river and the main line of the Canadian Pacific. The CPR, in turn, crosses the river just back of the photographer. The scenery along this stretch of transcontinental travel is particularly rugged and beautiful. Photographed near Lytton, B. C.

arch having a span of 552 ft. carrying the track 250 ft. above the bed of the river. The Niagara bridge carries the Canadian National traffic from Buffalo to Hamilton and points north and west. It is on the site of one of the early extension bridges over the gorge.

Out in the West there are still several long wooden trestles on the CNR main line, one of these being 1391 ft. long and 75 ft. high. One of the photographs shows Big Eddy Trestle in Alberta. Trestle designers prefer to make their structures straight, but Big Eddy Trestle is numbered among the exceptions.

There is a not-so-well-known section of the Canadian National which, in the opinion of some people, rivals the Niagara gorge for beauty. Here the Canadian National and the Canadian Pacific have a tussle for the sides of the canyon of the Fraser River. At one point each railroad crosses to the opposite side, and the Canadian National, being at an upper level, crosses over the Canadian Pacific as well as the river. A bridge 813 ft. long, with a 425 ft. arch, supports the CNR tracks 220 ft. above the bed of the river. This bridge is on the main line to Vancouver, and crosses over the main line of the Canadian Pacific, also to Vancouver.

Strangest Railway

A RAILROAD from Pootung, Shanghai, China, to the coast, 10 miles, has an odd assortment of rolling stock. The entire equipment consists of two small tractors, an inverted tank, an English omnibus, and a donkey engine. Yet the road does a good passenger business.

A New England Railfan

★ Autobiography of a camera toter who haunts the iron of the Boston & Maine.

By A. O. Wilkins.

SPEED shots are my particular weakness. My first was taken with a No. 2 Brownie in 1904. The negative still exists and makes a fairly good print, all things considered. In those days I had no knowledge of proper shutter speeds or lens openings, nor much of anything else, except to aim and shoot. The camera bug died in a year or so, and there is nothing left of the collection of diamond stacks and old-time Eight- and Ten-Wheelers. It would be priceless to me now.

The whole hellish business started again eight years ago when somebody loaned my daughter a Graflex for a week end. The collection of levers, gauges, and gadgets was too much for her unmechanical fingers, so it devolved upon me to take the pictures. The results were not bad, and one thing led to another until the family gave me a Hawkeye Special, and we were off. For still shots it was swell, but the Hawkeye had a fiftieth for top speed and the most that could be said of the result was that the rear end of a train at speed came out pretty well. Next was a Kodak, 616 size, with f.4.5 lens and 1/250 for top shutter speed. That was a good camera, and I have a number of excellent shots taken with it. The present box is a Zeiss Super-Ikomat, with f.4.5 lens and 1/400 for speed, and the same 616 size, which seems ideal to me for railroad photos. I am well satisfied with this camera.

While I photograph practically every moving train I see in good light, the thing I really try for is a dramatic effect. To do this except by chance requires a fairly complete knowledge of the railroad, and that is part of the fun. Ninety per cent of my activity is on the Boston & Maine, since it is the nearest to my home and has always been my personal favorite. Riding on the various divisions and driving along them, I keep a fairly good map in my mind regarding morning and afternoon light angles, grades, and curves. In spite of all possible preparation, something usually slips somewhere or somehow, so that if I get two or three really good pictures in a year's shooting I feel fairly successful.

A case in point has to do with a picture of the *Maine Bullet*. This hotshot ran for a long time with a P-4 passenger engine, and I was very anxious to get a speed shot of it. The chief difficulty was that, so far as our locality was concerned, she ran in the small hours of the morning. One Sunday morning on an aimless cruise (always near the railroad, of course) we heard something coming, and the *Bullet* slid by with her big Pacific. That was about 9 o'clock, with the light perfect. We chased her nearly 50 miles to Dover, hoping that she would stop somewhere to set something out, or to take water, but we landed in Dover only in time to see the vanishing haze of her smoke. Next Sunday we were on location at 9, but found that she had been gone an hour. The next week we were up at 6 (the lady enthusiast always goes on these trips), and drove the 12 or 15 miles to the Lowell Junction tower. The operator said she was about ready to leave Lowell, so we had no time to waste. We wanted to get as far west as possible, for while the eastbound light is nearly perfect anywhere between Lowell and the junction, the grade turns several miles back, and to shoot them drifting would be a total loss.

We cut over back roads and back and forth across crossings, stopping at each and estimating chances to make the next one; and at last, at one within sight of what appeared to be the top of the hill, we heard her whistle. I grabbed the camera, turned my collar against a wind that seemed to be from the North Pole, and beat it for a location. Everything looked good; the sun was low and strong, no clouds to bother, the P-4 was rattling the echoes with her exhaust, and steam was boiling over the tree tops like a thunder cloud. Then, just before she came into sight,

the engineer shut her off. My heart sank, but I decided to shoot the works anyway. As she came up into the finder she didn't look so bad. The blower was going, steam was popping, and a tail wind was banking the steam cloud behind the engine. I was pretty well satisfied until I saw the first print. The quick change from a warm car to the cold outside had fogged the lens. And so it goes.

I use a filter on nearly all shots, use Agfa Superpan Press almost entirely, and develop in Agfa 47. I have had excellent results with Eastman D-76, but it takes a little longer. I use mostly Defender papers with no special choice as to paper developer.

Marion Wilkins.

A. O. WILKINS LIKES TO PHOTOGRAPH TRAINS WITH PLUMEY CLOUDS OF SMOKE.

The *Maine Bullet* with the B&M Pacific No. 3719, below, is the train Mr. Wilkins had so much trouble photographing. It is running eastward from Lowell, Mass., very early on a frosty morning. The streamliner is the *Mountaineer* crossing Frankenstein Trestle in famous Crawford Notch; this train runs from Boston to Littleton, N. H., through some of New England's most rugged scenery. The smoky engines shoving reefers are Maine Central Mikes starting up the "hill" near Bartlett, N. H., during the well known hurricane that swept through New England three years ago. This mountain division was the only line open from east to west during the storms and the train was a hurricane relief special. At lower left on facing page is No. 4112, the latest Mountain type on the B&M. It is starting a string of coal and merchandise up Ashburnham Hill in the Winter. Just in case the name Boston & Maine may mislead you, the railroad has besides its important main to Portland, another main line which operates to Troy and Albany, N. Y.

A. O. Wilkins, 163 Essex St., Saugus, Mass.

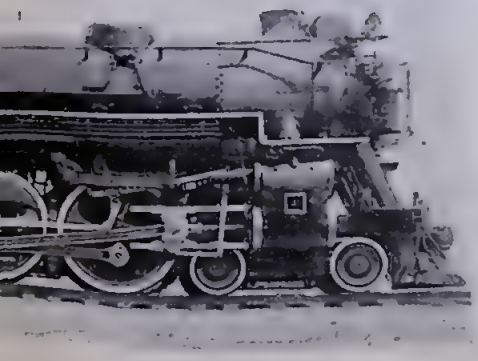
Chesapeake & Ohio at White Sulphur Springs

AMONG the most beautiful railroad stations is that of the C&O at White Sulphur Springs, W. Va. Here a small, pure white colonial building with green lawns is set before a background of pines on a hillside.

White Sulphur is among the country's most popular resorts. Just south enough to be South, almost equidistant from New York and Chicago, it is on a railroad that is packed with scenic beauty.

Here is westbound train 47, the *Sportsman,* in two sections. To the extreme left are tracks where Pullmans are spotted for the convenience of passengers to and from White Sulphur. The *Sportsman* will pick up one of these for Cleveland. Others wait for the *F. F. V.*, which takes them to New York.

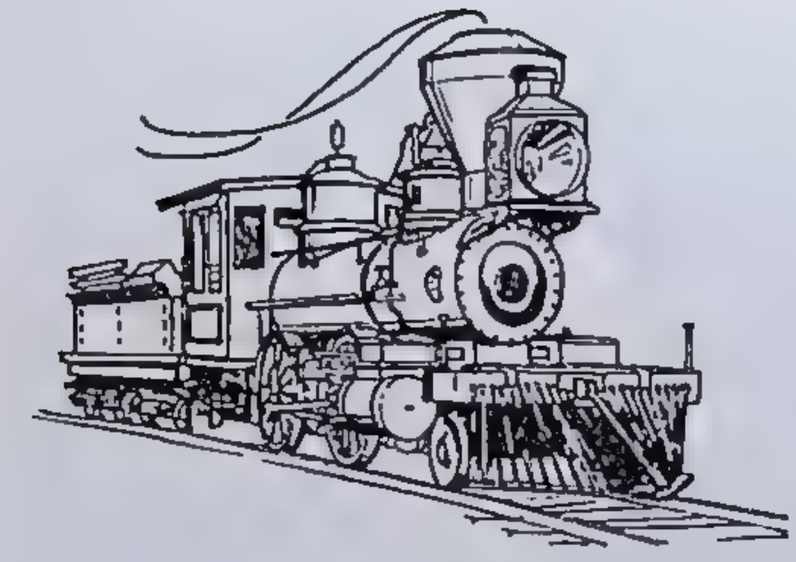
Locomotive 491 is a Pacific, as is No. 475, below. C&O locomotives can be recognized by rather massive lines, the air pumps located in front on the smoke box, snappy lettering, and brass or chromium trimmings. Notice the feedwater heater and bell positions on 491, and the engineer on the left running board steps. Hard to see is the fireman polishing the front window on the right side of the cab.



C&O Class F-19 Pacific.

These locomotives have Vanderbilt tenders, 12,000-gallon and 15-ton capacity. The engine drivers are 73″ diameter, cylinders 27″ diameter and 28″ stroke. Steam pressure is 200 pounds, developing 47,500 pounds tractive effort. This power is about equivalent to that of one and a half Atlantic type locomotives. The engines have 35′-7″ wheel base and were built by Alco at Schenectady. The stars and other trimmings were added for publicity purposes.

Virginia & Truckee No. 18 Goes to Hollywood



The locomotive on *Trains'* cover.

This story tells you about V&T No. 18. On the front cover of this issue is No. 11 photographed last August in the Carson City Shops. No. 11 also does snow plow duty, and still belongs to V&T. On page 3 is shown the abandoned station and train house at Virginia City, recently cut off from the main when a tunnel caved in near the summit. These two photos were taken by Linn Westcott on a 10,000-mile fan trip through the West.

Courtesy Union Pacific.

Courtesy Paramount Pictures.

Virginia & Truckee is a living ghost of the past. Stub switches, curved trestles, and square enginehouses are mileposts on the line of light iron that winds its way past Moundhouse and Gold Hill to Virgina City. In the seventies Virginia was the most important city west of the Mississippi, but, as the miners worked downward in the Comstock lode, the ground temperature grew hotter and hotter. Now great stores of gold may still be waiting for someone who can find a way to cool the mines, but Virginia derives much of its life from the tourists who come to see relics of the golden West. Rails to Virginia lie rusting while a bus makes a daily trip up the mountain.

Paramount remembered the V&T when the picture *Union Pacific* was

to be filmed, and bought No. 18, which had been used for snow plow service between Reno and Markleeville. Officially the engine is now Paramount No. 18, but in her movie roles she played the parts of Union Pacific's Nos. 58 and 119 and Central Pacific's *Jupiter*. For these roles she received a great transformation: fancy bell hanger, polished brass (excavated from under layers of paint), brass fluted top for the sand dome, and a long, sharp-pointed cowcatcher. The generator was slung underneath where it wouldn't be seen. Of course a new stack was installed, but the air pump

THE REJUVENATION OF OLD NO. 18.

Below is Virginia & Truckee No. 18 as she appeared on her home tracks before Hollywood acquired her. The plow was used for clearing snow every Winter. Nos. 119 and 58 are the same engine in different roles as actress for Paramount's *Union Pacific*. The detail shows fancy bell hanger and painted headlight.

Courtesy Paramount Pictures.

Courtesy Paramount Pictures.

FAMOUS J. W. BOWKER, A 2-4-0, ALSO STARRED IN "UNION PACIFIC."

Remember the scene where Barbara Stanwyck's dad met his death when the *General McPherson* went down with a collapsing trestle? The locomotive was really a scale model of the *J. W. Bowker.* Here the original poses as UP No. 21 racing an army of soldiers across the plains to fight the renegade Indians.

couldn't be removed because the Department of Commerce regulations require one.

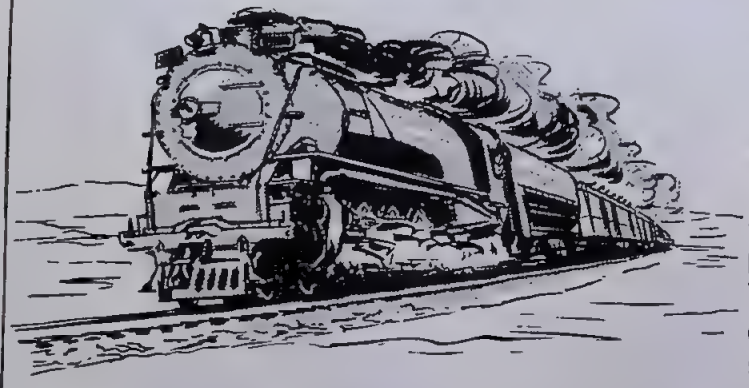
No. 18 played her role along with other old-timers that had undergone similar treatment, and then she toured the country, part of the time under her own power. The trip presented interesting problems. The tender was so low that a special funnel was made to fill her up with water. On these journeys she burned a special fuel oil rather than wood or coal.

One of the photographs shows Paramount's version of the driving of the golden spike at Promentory, Utah. On the left is Central Pacific's *Jupiter,* No. 60; to the right is Union Pacific's No. 119, alias No. 58, alias Paramount 18 and V&T 18.

Courtesy Paramount Pictures.

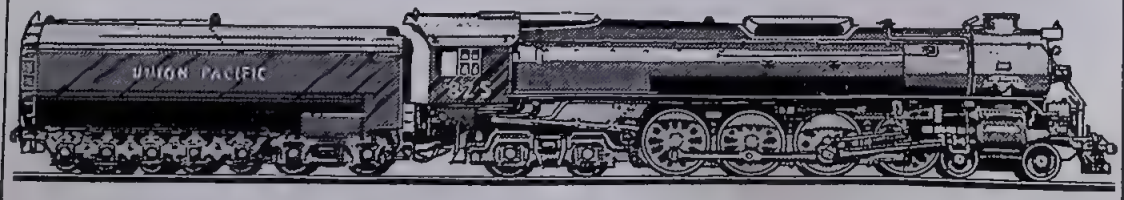
[Data courtesy E. C. Schmidt, Union Pacific; Cliff Lewis and O. C. Stratton, Paramount Pictures.]

Union Pacific 4-8-4



Identified by cast pilot and herald under headlight. Later series have air pump shields and 14-wheel tanks, also less exterior piping.

These Alco-built locos can haul 20 cars at speeds up to 70 m.p.h.



77" drivers Ht. 16 ft.
Tractive force 63,600 lbs.

300 lbs. boiler pressure
Weight of engine and tank 831,500 lbs.

G. REID

I Like Trains

★ Riding trains is a most interesting and exciting hobby; you can learn things, too.

By A. C. Kalmbach.

UNDER the vast dirtiness of the station shed there's a smoky, oily train smell. It's as distinctive—and, to me, as pleasant—as the fresh smell of farm land in Spring. Air pumps throb up ahead, men shout, mail and express trucks bump about, and steam traps hiss angrily. All about is an undercurrent of excitement, people saying goodbye, trainmen checking watches, enginemen eternally fondling their beasts. There's no walk quite as exhilarating as that stroll down the platform past luxurious bright windowed lounge cars and cozily curtained Pullmans to the porter or brakeman who says, "Right in here, sir."

It's fun to ride on trains, to doze in a coach to the musical accompaniment of the spinning wheels, to thrill at the puffing of the exhaust as the engineer takes the grade on high, to speculate on the passengers who come and go at the stops along the way, to check the running time as it catches up with or drops behind the timetable. It's fun to walk down the green curtained aisle of a sleeping car and drop off to sleep with the realization that in the morning there'll be new places, new people, new scenes. It's fun to get out on the observation platform in the early dawn with the mist still rising from the fields and the chill of night in the air. Trains are great things; great to look at and admire, but most of all, great to ride on.

Some people like locomotives, some like tracks, some like signals. To me the Pullman car is perhaps the grandest institution of all. It's a hotel on wheels which saves days because it allows me to go to sleep in one city and awake in another. But it's more than that. It somehow symbolizes the development of the railroad industry. It brings to me visions of those years when trains ran only by day, and then of the early sleeping cars with hard wooden bunks, then the original No. 9 by George M. Pullman, and the ornate "palace" creations which rode the rails at the turn of the century. How different now, when Pullman cars are an accepted part of daily life, simple and utilitarian, and yet with every comfort of the best hotels. What a far cry from the days when pine knots were burned on the pilot at night to the present when, under the guidance of automatic block signals and train control, we go to sleep in a Pullman car as safe as though we were home.

My very first Pullman ride was on a night express of the Pennsylvania RR. from Pittsburgh to New York. It seemed I never slept a wink. Conservatively speaking, that train must have gone a thousand miles an hour down the east side of the mountains. It slapped on brakes and then speeded up. But that excessive imagination of the inexperienced night rider has long been gone and I sleep as well as anywhere else, especially since I found a cure for curtainitous, that strange malady that makes Pullman sleepers wake up every now and then to lift the window shade and see where the train is. I buy an upper berth now—no window and no shade to lift!

In my upper berth I dream of the twin ribbons of steel which extend from wherever I am to wherever I want to be. It is these steel rails which tie together our country, for the United States is big; it could easily be half a dozen or more independent nations. But it grew up with the railroads, and good transportation brought with it political unity.

Perhaps with our streamliners and our vacation jaunts across the country we overlook the geographical greatness of our United States. Pacing the miles at 60 per on a passenger train, we again gain perspective and we realize the scale of our states as no mere maps can show it to us. The Easterner who can go through three of four states before luncheon realizes the size of the West only after playing nip and tuck with water stops, and nothing much else, for a whole day across Utah desert

on the *Challenger*. He is astounded to find that if he goes to sleep on a Southern Pacific train just out of San Francisco in the early evening, he may wake up in the early morning still in Northern California en route to Oregon. The spacious apartments of the transcontinental limited seem rather a bit of folderol until one spends two nights and three days living aboard train from Chicago to the Coast.

Of course the streamliners have changed things some, but the inverse experience of dining in Chicago and breakfasting in Denver with a bit of dreaming on a *Zephyr* in between, while rather numbing, only serves to emphasize the distances. And, if you will, stand with me in the chilly dark of early morning down in Gallup, N. M., the Wednesday before Thanksgiving, waiting for *El Capitan,* which will bring me to my family in Milwaukee by 10 Thanksgiving morning—six states and 1600 miles away! Detroit is hardly more than a suburb of Chicago and Los Angeles is only overnight from Salt Lake City.

The scenery always seems prettier by train. "But," my friends say, "you can't stop a train when you see a beautiful view." No, I can't, but sometimes the railroad does. Twice a day the *Scenic Limiteds* pause in the cool depths of Royal Gorge while passengers file out to crane their necks at the canyon rim far above. The Pennsylvania trains always slow as they round the Horseshoe Curve, and many a service stop is in the midst of ruggedly beautiful country. Even without stops, I am unalterably free to look to my heart's content. There's no need to watch the road as the *Olympian* winds high up on the west side of the Continental Divide with Butte set like a cluster of doll houses far down in the valley below. There are no signboards to mar the view as the *Empire Builder* glides through the late afternoon along the south shore of Whitefish Lake. And if the low slanting rays of afternoon sun bother, there's no need to squint at them through a windshield. Just change seats to the other side of the train and enjoy the beautiful effects of lengthening shadows on hills and trees and buildings.

Scenery along many a rail route stretches on and on, hour after hour, and who needs to stop and gape at one spot if there is a continuous succession of spots until the sun goes down? There's that day when the *Exposition Flyer* takes you up from Denver to the Moffat Tunnel, around high curves from which you can see endless miles of great plains stretching out toward a curve that is the eastern horizon, when you run for hours through the heart of the Colorado Rockies and along the upper reaches of the Colorado River in Glenwood Canyon. There's another day on the Spokane, Portland & Seattle, traversing the

The *Pacific Limited* nears Yuba Pass.

Southern Pacific No. 14 east (No. 21 west) climbs the Sierras on the line of the old Central Pacific, pulling a string of sleek Pullmans upward toward the summit. It was on these slopes that Chinese coolies toiled with picks and pushcarts to cut Engineer Judah's grade in the great transcontinental race with the Union Pacific.

Courtesy Southern Pacific.

F. T. Richardson, 1634 E. 53rd St., Chicago, Ill.

Michigan Central's first and second 58 wait at Illinois Central Station.

Chicago's Central Station is the IC's northern terminus, but, like all Chicago stations, it is used by many different railroads. Here is MC No. 58 in two sections bound for Detroit, Buffalo, and New York. The train is called the *Niagara*. It leaves Chicago at 8 p.m., taking 21 hours to reach Manhattan. Through cars run via Niagara Falls. Other railroads from Central Station are Big Four and the South Shore Line.

Columbia River gorge, fresh, green and lovely, yet magnificent in its size. There's a day on the Lackawanna, sitting at ease in that unbelievable lounge-coach looking out of wide windows at the Delaware Water Gap, at the Pocono Mountains, and at the green of southern New York State.

Trains are not only for him who cranes his neck at scenery. They are for him who likes to plan in advance. When I make business dates in other cities I like to keep them, on the dot. Snow or sleet or rain or zero weather, the trains put me into my destination on time. I can plan my time definitely with a timetable. Some people tell me it's fun to be carefree about traveling and to take a chance on finding a good stopping place each evening. But the vagabond nature is not mine, and even if it were I'd still prefer trains, for, after all, with frequent schedules and liberal stopover privileges, it's easy to travel as one wishes.

Even seasoned travelers do not always know of the flexibility of railroad ticketing. Stopovers, and on most classes of tickets you can stop off at any station or stations within the final time limit of the ticket, are but one desirable feature. Optional routes and free side trips add to the number of cities which can be included in one trip, and the cost is low because in buying railroad transportation one pays for the mileage from starting point to destination via the shortest route, regardless of the fact that the actual trip may be many miles extra. If you really want a bargain, take the Western Transcontinental round trip fare of $65 coach, $74 tourist Pullman, or $90 first class between Chicago and San Francisco, covering a circle from Chicago to Winnipeg, thence to Vancouver, down the Pacific Coast to Los Angeles, and return via New Orleans, a trip of some 7000 miles, depending on exact routeing, at the price of 4500! Into a routeing of this kind one can work almost any conceivable variety of stops or scenery, and an amazing number of entirely free or nominally priced side trips to off-line points such as the national parks, or the Pacific Electric to Hollywood or Long Beach. Pullman berths are, of course, extra, but the cost of these accommodations is usually less than one would pay for a hotel room, or, if time is no object, schedules on most lines permit stopping in hotels overnight and saving all the scenery for daytime.

Many of the ticketing features are revealed by casual study of timetables, and any passenger agent is glad to help arranging trips to take advantage of less obvious routeings and fare arrangements. Study of any railroad's individual time folder will show the various routeings over its own lines by which tckets between certain points are good. For instance, long distance east and west tickets on the Pennsylvania are good via Washington and Baltimore as well as by the direct main line from Harrisburg to Philadelphia. From Milwaukee I can go to Madison, Wis., either direct (83 miles) or via Janesville (112 miles) for the same price. Timetables also tell of optional honoring arrangements. Eastern roads have attractive round trip fares, but these fares are good only if the ticket reads via the same railroad in both directions. But, New York Central tickets are good on the B&O and Pennsylvania, and vice versa. So, at round trip rates, one can go from Chicago to New York via any NYC route and return via Pennsy or B&O.

The timetables themselves intrigue me. That 1500-page book, the *Official Guide of the Railways,* at $2 per copy, is reading matter for many an evening. Does the *National Limited* stop at Oakland for *a,* and what is *a* anyway? "To leave from Washington, D. C., and east." And what becomes of the 12-section Pullman that goes west on No. 33? What kind of connections can one make from Saginaw, Mich., to Cincinnati? And who wouldn't get nostalgic for a train ride after looking over the schedules of the *East Wind* and the *Flamingo* and the *Black Gold?* The very names of the trains have an aura about them.

The people I've met on trains are almost as interesting as the routes and the trains themselves. There were two dear old ladies who sat behind me on the *Daylight* as we started the climb out of San Luis Obispo north to the Santa Margarita Tunnel. We had put on the usual helper at San Luis Obispo, a plain black business-like 4-8-4 coupled on ahead of the streamliner. As the train slowly and laboriously pulled into the Horseshoe Curve part way up the mountainside, one of the dears pointed to the engines and said, "No wonder we're going so slow. That nice new fast engine has to push that old one ahead of it."

A youngish, well built man who stood with me on the observation platform of the D&RGW's *Scenic Limited* one afternoon, and who seemed to know something about the road, turned out to be trainmaster of the division, and at Salida he introduced me to two division superintendents. All were going on this same train to Grand Junction. Since the three of them wanted a fourth at bridge, and as I was interested in railroads, we played a desultory game over Tennessee Pass while they told me the ins and outs of their railroad and pointed out all the sights. Then we had such a dinner as a dining car chef can serve only to the brass hats, with extra helpings of the Rio Grande's unexcelled Rocky Mountain trout and a try-out of a new kind of pie.

The long distance travelers on the Western trains are always a friendly lot. It may be merely close association for several days, or it may be a genuinely greater friendliness of Western people. At any rate, there's nothing quite like a trip on the *North Coast Limited* to learn all about the lumber business from some enterprising entrepreneur or about importing from a bright young Japanese who is going the same way you are. A trip East on the *Grand Canyon Limited* may reveal the interesting tid-bit that many a Californian turns in his old car and then goes East by train to pick up the new car at the factory and drive it out West. The saving in freight helps pay for the vacation. The *Portland Rose* may turn up a small-town Kansas banker going to see his brother in Seattle, and anxious to while away the time talking about the eccentricities of borrowers.

East of Chicago the travelers are less chummy but equally interesting in a second-hand sort of way. The gray-haired tycoons at the next table in the *Century's* diner are talking of hundreds of thousands and the man across the aisle at breakfast on the *Capitol* is telling his companion that he "told Bob Young he'd get into trouble taking over the C&O." The business man seated at the table with me on the *New York Special* as we rolled steadily along southern Ontario at 80 m.p.h. expressed interest in the Korelle Reflex with which I was taking pot shots out of the window and turned out to be next-door neighbor of a friend of mine in Boston. Another chance acquaintance on the same train earned his living as a specialist in putting businesses back on their feet, and told me of many an interesting example in his line.

Overshadowing even all these reasons why

A. C. Kalmbach.

Try a one-man fan trip next time you ride the Central.

Seventeen NYC trains will stop for you at Westfield, N. Y., on the Buffalo-Cleveland section of the main line. Here you can take a fascinating side trip to Jamestown on the Erie RR—up the bluffs on a zigzag, crossing a branch of the Pennsy, running for 20 miles along the shore of Lake Chautauqua, riding in steel cars of the Jamestown, Westfield & North Western RR. The whole trip may be made practically between train times (of the NYC) and costs little over a dollar. The JW&NW has six interurban coaches, two baggage, four combines, three locomotives, and a caboose. Here an agent loads Railway Express shipments into No. 302 waiting at Westfield. This is on train No. 3 leaving at 9:55 a.m. for Jamestown, 32 miles away.

I like to ride trains is the simple fact that I like railroads, and there's no place like a train for observing the railroad. For the railroad is not shops and locomotives and roundhouses alone. It is a living organism that stretches across the face of the earth for hundreds and thousands of miles. It is the men who run the trains and the trains themselves, schedules and regularity and service as well as equipment. The railroad is the conductor who smiles as he takes my ticket, the porter who is watchful to see that I get up early enough in the morning, the men in the interlocking towers and station bay windows that flash by. And the railroad is the solid trains of fruit rolling Eastward over the Union Pacific and the heavy coal drags we pass on the C&O and the strawberries coming up from the South in Spring on the Illinois Central. I can't see and feel all this down at the roundhouse or station. Traveling over the system one can feel the pulse of traffic and see the mechanism that handles it. Whisking into cities through yards and over busy interlocked track patterns, stopping for fuel at isolated railroad towns in the open spaces, crawling past car and locomotive shops, railroad riding is made to order for the man who likes railroads.

No vision of Sunday drivers' Utopia, four lanes wide with no traffic, can lure me away from taking a train ride, sensing the greatness of the railroad business, and being a part of its activity. Little shivers run up and down my spine at the thought that day after day for years this train, though changing in equipment and personnel, has been doing its reliable stint between these same cities. As I stand on the rear platform I thrill to the sight of the brakeman on a passing train lifting his lantern to indicate that all's well with our train. Wherever I am the thought takes me that these twin ribbons of steel extend uninterrupted to my home.

And so, tomorrow, instead of filling my tank with gas, I'll down to the station and off on the *Forty-Niner* or the *Union* or the *Banner Blue* for a real ride, the greatest ride in the world.

Courtesy Great Northern.

Long trains originate at Appleyard.

Wenatchee, on the Columbia, is the heart of one of the great apple districts of the Northwest. In the right distance is the city, and beyond, to the left, is the tributary valley of the Wenatchee River. Apples are grown in the valleys of both rivers, picked up from the packing houses by a way freight or special train, and brought to Appleyard. Here they are classified into long trains and sent eastward to the markets. The main line passes around the extreme left of the yards and engine house. The white building at the right near the river is the ice house. A conveyor takes the ice blocks across the first track to an elevated icing platform between this and the second track, where reefers are spotted. Reefers are iced before loading, re-iced when necessary, or heated in Winter.

Great Northern Apple Rush

★ Fifteen thousand refrigerator cars make their way to Wenatchee each Fall to handle perishable fruit.

By Charles W. Moore.

From the orchards of Central Washington's fertile Cascade country, growers have been shipping, since early October, tons and tons of red and yellow apples to the housewives of the world. Once under way, movement of an apple crop from Wenatchee—America's apple capital—reaches and maintains a fast pace for a two-month period. Apples are a perishable and highly competitive commodity. They must be at or on the way to markets when prices are most advantageous to growers. In short, it's a transportation problem of the railroads to get them there. Great Northern Ry., running through Wenatchee, transports more apples than any other railroad in the world.

The fun begins when the Wenatchee Valley is a pink and white fairyland of fragrant blossoms. Development of growth from bud to mature fruit is under constant observation by government experts, and their periodical reports are studied closely by the Wenatchee agent of the Western Fruit Express Co., a Great Northern subsidiary. By mid-July, when the fruit approaches maturity, comparatively accurate information as to the size of the year's yield is available, and the mobilization of equipment for the quick, safe transport of another apple crop is begun.

The Wenatchee apple, like its cousin, the orange, requires special equipment and handling. The ordinary freight car won't do; the apple goes to market in a refrigerator car which insures arrival in prime condition. It is in insurance of this kind that the Great Northern has invested a staggering sum. Fifteen thousand refrigerator cars from all sections of the United States are mobilized for the annual apple haul. The Western Fruit Express equipment is augmented by foreign line reefers, the cars which have been in similar service in the South and Southwest during the earlier fruit and vegetable shipping seasons. [WFE cars also are utilized

Courtesy Great Northern.

Western Fruit Express Ventilated Refrigerator.

WFEX is a subsidiary of the Great Northern. It operates about 7000 refrigerator cars. For comparison, Pacific Fruit Express operates 37,000 and Merchants Despatch 13,000. The car pictured is No. 49846, ventilated refrigerator, one of 994 cars numbered between 49000 and 49999 inclusive. It takes nearly 5 tons of ice to fill the tanks of this type of car, and the ice must cool 2060 cu. ft. of air and merchandise space.

extensively in the latter movement, for owners of reefers make every effort to keep this type of equipment in the earning column.]

Cars for the apple haul are reconditioned in WFE shops in St. Paul, Minn., and Hillyard, Wash., near Spokane. Although both shops are active throughout the year, the tempo increases with the approach of the apple-shipping season. Equipment assigned for this service is checked minutely for faulty construction and appliances. Repairs are made when necessary, and each reefer receives a substantial internal scrubbing. When the outside paint job is below standard, the brush and bucket gangs go to work.

As the reconditioned refrigerators leave the shops they are moved to the Great Northern's concentration point in Appleyard, Wash., just outside Wenatchee. Here, before the fruit movement swings into full steam ahead, miles of reefers are collected, ready for action.

Orders for refrigerator cars are placed at least one day in advance of loading. Shippers specify whether cars shall be iced, heated or ventilated, for the temperature and condition of the air inside a reefer is of prime importance to apples. If icing is required, the car is pre-cooled the day before loading; 9600 pounds of good, solid ice per reefer is loaded into hoppers at each end of the car.

Local trains, operating on the Great Northern's main line to Leavenworth, 22 miles west of Wenatchee, and to Oroville, 137 miles north, deliver empty, serviced cars daily to shippers when the apples begin to roll marketward. Loaded reefers are returned to Appleyard, and within a few hours are speeding eastward, either in 5000-ton extra trains of from 100 to 110 cars, or as part of the Great Northern's top-flight fast freight, No. 402.

These long, fast freights are the most important factor in the plan to expedite movement of an apple crop. Only a few years ago apple trains moved from Wenatchee to the Twin Cities — 1609 miles — on a 140-hour schedule. Today trains are operated on a 108½-hour schedule which has eliminated the

Linn H. Westcott from a color transparency.

THE COLUMBIA IS A GREEN STRIP THROUGH DESERT.

In the floor of the valley as far as one can see are apple trees. In the distance are cliffs of volcanic rock and plateaus of dry grazing country. At the far right in this picture (south of the camera) is Wenatchee. In the center is one of the fruit packing houses located on the branch of the Great Northern which runs north along the Columbia, eventually entering Canada and connecting with the Kettle Valley RR. of the Canadian Pacific. Although Washington is noted for its greenery, pines and other all-year trees, its cool meadows and lakes, the central part of the state from Spokane to Wenatchee, from Oregon to Canada, is extremely dry—almost a desert—and much of it is too rocky for farming but is ideal for orchards.

Linn H. Westcott from a color transparency.

CASCADE TUNNEL ELECTRIFICATION IN APPLE COUNTRY.

Here is a Great Northern locomotive, electric No. 5008, at Cashmere on the Wenatchee River. In the distance can be seen a wooden flume crossing a trestle and carrying irrigation water to the apple region. The electrified section of the Great Northern starts at Wenatchee and runs westward in the Wenatchee valley to the Cascade tunnel, thence down the western slopes of the mountains toward Seattle and Tacoma.

choking of main line traffic as was the case with slower trains.

Such operation requires abundant and efficient motive power. So, while refrigerator cars are being conditioned for the apple movement, motive power likewise is reconditioned. The company invests hundreds of thousands of dollars yearly in grooming locomotives for the fruit movement from Central Washington.

Several types of locomotives are required for operation of fast freight service, and motive power employed depends on both the load and the country through which the train is operated. Much of the operation between Wenatchee and the Twin Cities is through the northern Rockies. Between Wenatchee and Spokane, special 5000-ton trains are powered by either R-1 articulated type locomotives (2-8-8-2) or Q-1 types (2-10-2); from Spokane to Whitefish, Mont., the power may be either S-1's (4-8-4) or O-8's (2-8-2); then "up the hill"—over the Continental Divide—the trains roll behind R-2's (2-8-8-2) to Havre, Mont., and from Havre to Williston behind O-7's (2-8-2), and into Minot with R-1's or Q-1's; back to O-7's between Minot and Breckenridge, Minn., then down the home stretch to Minnesota Transfer in St. Paul behind O-1's (2-8-2).

En route East, apple-laden reefers are inspected and serviced by WFE crews at Hillyard, Whitefish, Williston, and Willmar. Ice is added to cars at these points, when necessary, or heaters are lighted should weather conditions require it. WFE experience with the apple movement shows that the bulk of each year's crop is moved during the period when cars are iced; after Christmas apple cars are heated to prevent freezing of the fruit.

Album of Engines

FROM Engineer Leo J. Henen, Huron, S. D., comes a unique album of locomotive pictures. Each picture is a small reproduction in colors enclosed in packages of British-made cigarettes. The tobacco company furnishes albums with blank spaces for the pictures and with printed descriptions of the locomotives.

Letters

★ More on tunnels; rates; abandonment; odd double-header.

Still More Interurban Tunnels.

So! You don't want us to say we like TRAINS. Can't take it, eh? Want constructive criticism. Well, if succeeding numbers show as much improvement as No. 2 over No. 1 (which *was* swell, Mr. TRAINS, even if you wish we'd keep it quiet), you'll never need any criticism of any type.

Am I too late to put in a word on the subject of interurban tunnels? No? Good:

There were three such in the Pacific Northwest. The earliest of these was short, maybe 150 ft. in all, on the late-lamented Puget Sound Electric which ran from Seattle to Tacoma, trolley through the cities and third rail in the more rustic regions. Between Seattle and Auburn the line closely paralleled the present lines of the Northern Pacific (used also by the Great Northern) and the Union Pacific-Milwaukee. South of Auburn, however, the track angled southwest across the valley and climbed the hills between the valley and Puget Sound. Soon it turned up a narrow ravine to the summit at Edgewood Station, whence it again decended through Milton and crossed the tide flats to Tacoma. The tunnel was located just where the line turned into the ravine, and was built through a point too sharp to be negotiated otherwise. It was located between Pacific and Jovita stations; traces of it may still be seen above state highway 5-M, which it overlooked.

Next built was the Cornelius Pass tunnel of the United Rys., located about 16 miles northwest of Portland. Its location is quite spectacular, between two long trestles each about 100 ft. above the creek beds. Originally, in the interurban days, there were three passenger trains daily in each direction; later, when the line was extended to Vernonia, the overhead structure was removed and a once-daily local steam train substituted. Now only a twice-weekly freight and many log trains running as extras between the camps and the log dump about 5 miles southeast operate through Cornelius Pass and what was the longest interurban tunnel in the Northwest, at least .9 mile long (I haven't the exact length available).

Most recent interurban tunnel was Elk Rock Tunnel of the Southern Pacific's electrified west side division, about 6 miles south of Portland on the Willamette River. Originally this route was a part of the narrow gauge Oregonian Ry.; for the first two years, this road operated only south of Elk Rock and had a slip there at which connection was made with river steamers for the trip to Portland. Then was completed the old Elk Rock Trestle, a thrilling structure hugging the curving face of the rock above the eddies of the river. The trestle was about 1000 ft. long; trains crawled across it under a 5-mile speed limit. Principal operating difficulty was the cliff, which frequently loosed huge boulders upon the trestle. So far as I can learn, none of these ever came down upon a train, but it was necessary to maintain a patrolman who walked the ties ahead of every train at the trestle's southern end—quite a task under the frequent headway of interurban service.

In the early twenties the trestle was replaced with a 1395 ft. tunnel. Unfortunately, it offered but one feature which might compensate for the thrilling trip over the trestle: It was lined with Port Orford cedar and every train emerged smelling like something fresh from the bride's cedar chest.

When the SP pulled off its trolley cars about 1930, the gas-electric motors which it substituted were routed over the Oswego bridge and into Portland through Milwaukie and on the main line. Since then the old route has been used only for switching into the industrial district along the west side of the Willamette south of the business section.

David L. Stearns.

764 North Point, San Francisco, Calif.

[James T. Wilson, 138-30 Northern Blvd., Flushing, N. Y., writes that there was a .9-mile tunnel through solid rock on the Wilkes-Barre & Hazelton Ry. under Penobscot Mountain at the summit of the line. The Laurel Line at Scranton still uses a double-track tunnel over a mile long. Pittsburgh, San Francisco Municipal, and San Francisco Market St. lines all have long city tunnels, and there are trolley subways at Boston, Newark, Los Angeles, Philadelphia, Rochester, Chicago (under the river), St. Louis, and Cincinnati. The last one never operated but still it's there.—*Ed.*]

Railroad Rates Too Complicated.

"MAKING Railroad Rates" in the November TRAINS gives the reason for the immense complexity of the railroad rate structure, but that doesn't help the ordinary shipper who wants to get a rate on freight. The mere fact that a problem exists doesn't mean that it can't be solved. Did you ever try to get a rate on the same item from both a truck line and a railroad? Usually the railroad calls back in an hour or two; the truck line quotes the rate almost immediately. Have you ever tried to get the same rate from several different railroad agents? There's almost certain to be a discrepancy between them, even though the law requires the same rate for the same goods between the same stations.

The same thing is almost equally true of passenger fares, which are not nearly as complicated as freight rates. Remember the Pullman contest a year and a half ago? One of the requirements was that with each entry the fare for railroad plus Pullman from the entrant's home town to one of the world's fairs should be correctly stated. I called three different railroad passenger agents asking the rate on the same accommodations between Des Moines and the San Francisco Fair. I got three entirely different answers. I'm still doubtful as to which answer was right and whether my entry was acceptable or not.

Shipper.

Des Moines, Ia.

Abandonment of Lines.

WHY is it that railroads, particularly interurban lines, cannot see that by abandoning the far ends of their systems they are only paving the way for further abandonment, until finally nothing exists but a memory?

The reason always given for abandonment of outlying lines is that there is not enough revenue to support them. Yet there *is* some traffic, and this traffic helps to support the inner lines of the system. Take it away, and revenue dwindles on the remaining part.

Instead of figuring revenue from a middle station to a far station in computing profit and loss, wouldn't it be more accurate to figure from *main terminal* to far station, and credit *all* of this amount to the distance between the middle station and the far?

Waukesha, Wis. *Muskego.*

Unique Double-Header.

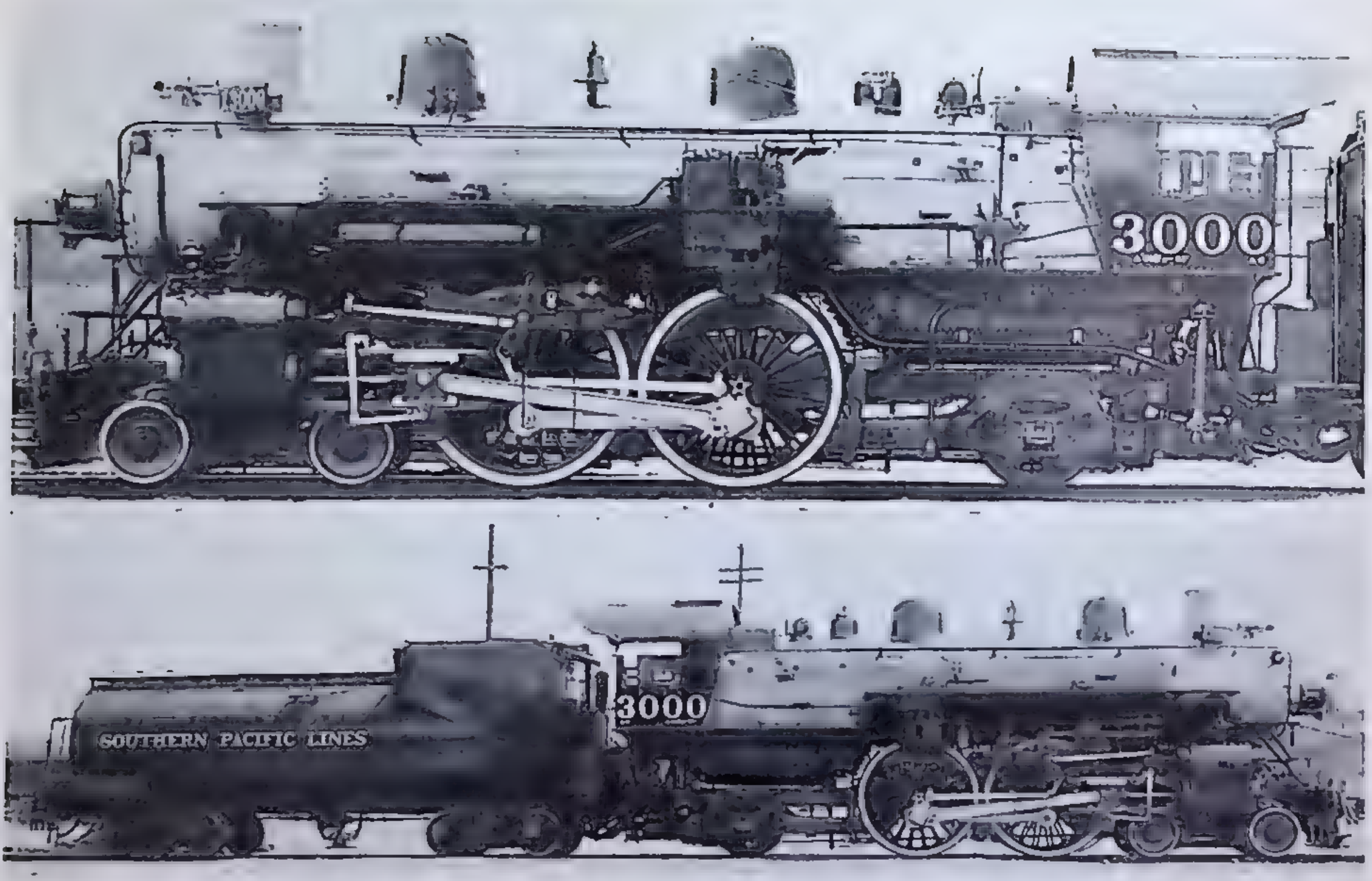
THE Pennsylvania-Reading Sea Shore Line runs a daily sand and gravel train—sometimes as many as 75 cars—out of Millville. It is unique in that it is double-headed with one locomotive from each of the parent roads. On the day I took the accompanying photo it was headed by Pennsy No. 1233, a 2-8-0, and Reading No. 301, a 4-4-2 camelback, and consisted of 65 cars.

Granville Thomas.

P. O. Dept., Millville, N. J.

Granville Thomas.

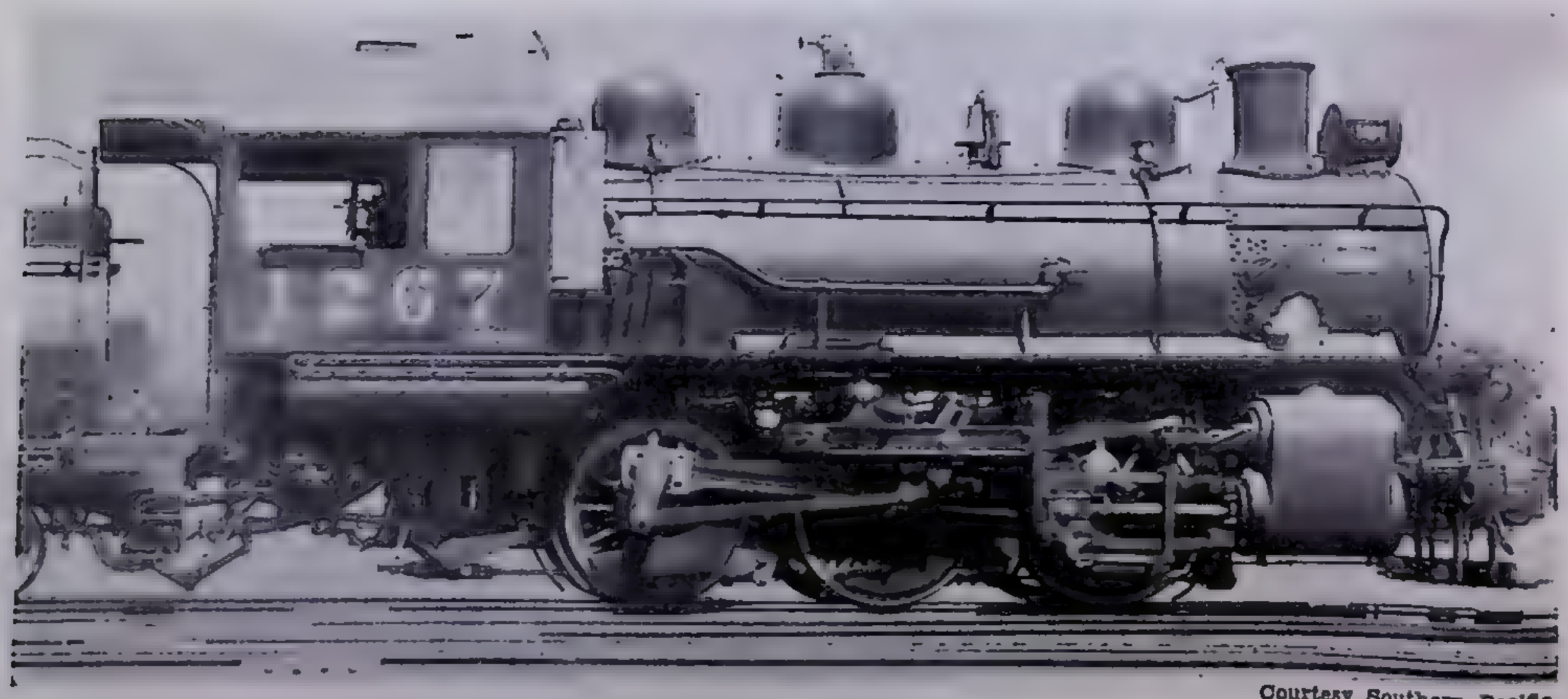
Pennsylvania-Reading sand and gravel train of 65 cars leaves Millville, N. J., behind engines of both roads.



Courtesy Southern Pacific.

Small Southern Pacific engines.

Southern Pacific No. 3000 is an Atlantic used in short haul passenger service. It has 81" drivers, 22" x 28" cylinders, and works on 210 pounds steam pressure. The large pump on the left side is a Worthington feed-water heater. Four engines, 3000 to 3003, comprise this A-6 class. Below is switcher No. 1267 of the same railroad. Southern Pacific locomotives have a rather characteristic cab and dome design, and usually have aluminum or dull black paint around smoke box.



Courtesy Southern Pacific.

The Month

★ Train tours to Western states feature fine choice of stops.

★ Chicago & North Western and Union Pacific offer the BC, HC and WC tours for Winter vacation trips to California. HC features the football game at the Rose Bowl, New Year's Eve at Hollywood, and trips to Catalina, Boulder Dam, and Santa Barbara. All three trips include both San Francisco and Los Angeles. WC even takes you to Death Valley Scotty's ranch. If you can make it, see your favorite passenger agent.

★ Gulf, Mobile & Ohio, the new railroad system featured on page 12, is getting two new streamlined locomotives from Electro-Motive to pull its *Gulf Coast Rebels*; these trains will use the Mobile & Ohio main line, St. Louis to Mobile. The railroad also has received 1000 box cars and 250 gondolas, according to the *Rebel Route News*.

★ A Missouri law limiting to 5 minutes the time a train may occupy a crossing, except crossings in cities of 10,000 population or more, is considered unconstitutional, and may not be enforced.

★ A portion of the Trenton-Princeton Traction line, reported to be abandoned last month, was saved at the eleventh hour by pleas from potential users of the freight facilities of the road. Track to be operated for freight only is 5 miles long.

★ Illinois Central gets the first two of a new type of air-conditioned rail car. Motors are oil-burning but not Diesel, and they drive the wheels by a combination hydraulic torque and direct drive transmission. The car has a "railfan seat" directly at the front window, and the driver's cab is not walled apart from the car. Car *Illini* is painted the colors of the University of Illinois, and the *Miss Lou* is colored for Mississippi and Louisiana universities.

★ Abandonments include a threat to remove Rochester, N. Y., trolley service. Since the tracks are in bad condition it is likely that buses will be substituted. New York Central will abandon the 23.6-mile branch from Lansing to Springport, Mich.; the New Haven, 11.2 miles from Adamsdale Junction to Franklin Junction, Mass.; Norfolk & Western, Lewis Creek branch from Lewis Creek Junction, Va., 9.1 miles (operation was abandoned in 1938); Southern Pacific, Los Gatos to Olympia on the San Jose-Santa Cruz line, 15.2 miles, and more than 40 miles of the electrically operated track in Oakland and environs. The entire Charlotte, Monroe & Columbia from Jefferson to McBee, S. C., 17.2 miles, will be abandoned.

★ Don't forget the ski trains if you live in the Northeast. New Haven RR. is putting on quite a number of specials this year.

★ Last year marked an outstanding progress in passenger accommodation and travel on railroads. During the year 32 new streamlined trains were put into service and there are plans for 23 more. Most railroads showed increases in passenger revenue.

★ Chicago & North Western speed limits on train control trackage between Elmhurst, Ill., and Council Bluffs, Ia., have been raised to provide for improved service on this 470 miles of line. Speed limits are now 63, 73, and 93 m.p.h. for freight, passenger, and Diesel equipment respectively.

★ The black caboose reported seen on the Milwaukee Road was No. 01607, assigned to Joseph Bodenberger, general road foreman of engines. It is used as an office and residence during lengthy observation of locomotive performance on some of the road's lines.

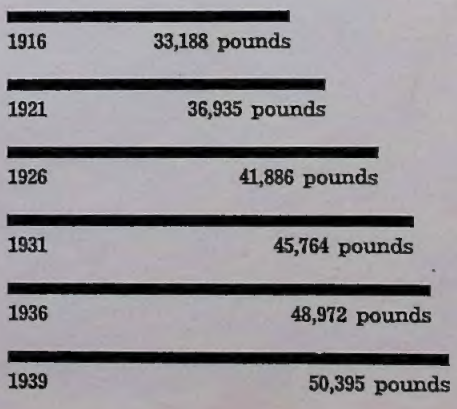
★ Rock Island is instituting the new Choctaw Rocket to provide high speed streamline service from Memphis to Amarillo, Tex., starting westbound at 8:30 p.m., eastbound at 3:15 p.m. and requiring approximately 17 hours for the journey. Service started Nov. 17.

★ Upholstered modern chairs will replace old wood benches in the Des Moines station of the Rock Island. No longer will the ticket office look like a bank or a jail, for the agents will stand behind a modern counter. The railroad likes to call the new waiting room a "reception room," another step in streamlining railroad business.

★ More news on page 42.

Locomotive power increases.

Here is a graphic illustration of the increase in average locomotive tractive effort since World War I. Figures are average pounds per engine.



★ Another new train is the *Arizona Limited*, streamlined and Diesel-powered, running from Chicago to Phoenix every other day during the Winter, via Rock Island and Southern Pacific.

★ Norfolk and Western presents *The Power Behind the Nation*, a new sound and color motion picture telling the fascinating story of bituminous coal, its meaning to industry and its economy to the world. The 38-minute film is narrated by Bob Trout of C. B. S. It includes the first color movies taken inside a coal mine, shows the railroad's importance in handling America's most important mineral, and tells the story of coal formation.

★ Will the trend of removing car lines turn back? The Philadelphia Rapid Transit wanted to keep the Broad & Olney line, No. 55, according to the *Southern New Englander*, but somehow the tracks were torn up. Now passengers are kicking about the bus service and petitions to re-lay the tracks are circulating. The plan is feasible since the streets along the route are scheduled for repaving. Route 55 goes to Willow Grove via Old York Rd.

★ The Baltimore & Ohio buys three and a half locomotives. How is that possible? Well, the B&O already has six 3600 h.p. twin Diesel-electric locomotives and one 1800 h.p. locomotive. The new engines will be twin 2000 h.p. locomotives and the extra half will fit along with the 1800 h.p. to make a pair. This will give the B&O a total of 10 Diesel-electric locomotives of 3600, 3800 or 4000 h.p. in passenger service on the B&O and the Alton. These locomotives are numbered 50 to 59 inclusive. The B&O also has on order 25 new switching locomotives from Electro-Motive.

★ Semaphores on the Missouri Pacific will be replaced by color light signals on all the lines as a year-by-year program is carried out. The new signals are more practical since they have no exposed moving parts. Semaphores will some day be a symbol of old days just like the highball.

★ Pennsy's No. 6100, the 6-4-4-6 delegate to the New York Fair, will haul the blue ribbon trains out of Chicago. She can handle 14-car trains at hundred-mile speeds.

★ If all railroad tracks in the United States were extended into a single line, a train traveling 60 m.p.h. would require 262 days to complete the run.

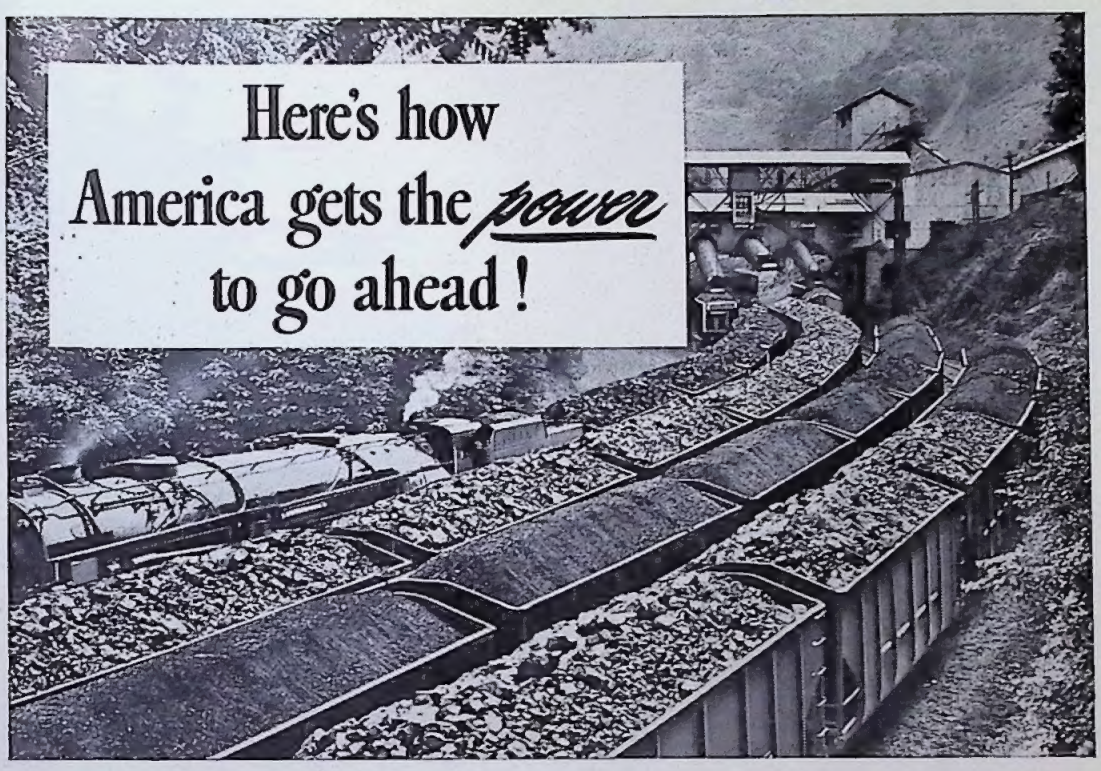
On the Back Cover.

On the back cover is one of Norfolk & Western's heavy articulated locomotives, No. 1207, with a long train of mixed freight. Notice the neat edge to the ballast. (Photo courtesy N&W.)

Three-Quarters View of New NYC Mohawk Locomotive

Courtesy New York Central System.

By request we print a semi-side view of New York Central's Mohawk featured on December's back cover.



Here's how America gets the *power* to go ahead!

WHAT do you see here? Just a lot of railroad coal cars? Listen—

You're looking at the greatest source of energy in America.

Coal is the No. 1 source of power in the nation's factories.

Coal is the No. 1 source of warmth in the nation's homes.

Coal gives us iron and steel. Coal generates most of the electricity used in this country. And just a handful of coal contains enough energy to pull a ton of freight a mile on America's railroads.

Did you know that it takes more than a million tons a day to supply the nation's demands for light and heat and power?

Did you know that the annual value of the bituminous and anthracite coal mined in the United States *exceeds that of all other minerals combined?*

But without adequate transportation from mines to the rest of the country these coals would have little value. Few people could enjoy their warmth and comfort — most manufacturing plants would have to be located near the mines.

It is only because railroads provide quick, dependable, cheap transportation to every corner of the land that people can use this inexpensive fuel, and that manufacturing and power plants, producing for our daily needs and for national defense, can be located long distances from the coal fields and still be sure of a steady flow of fuel.

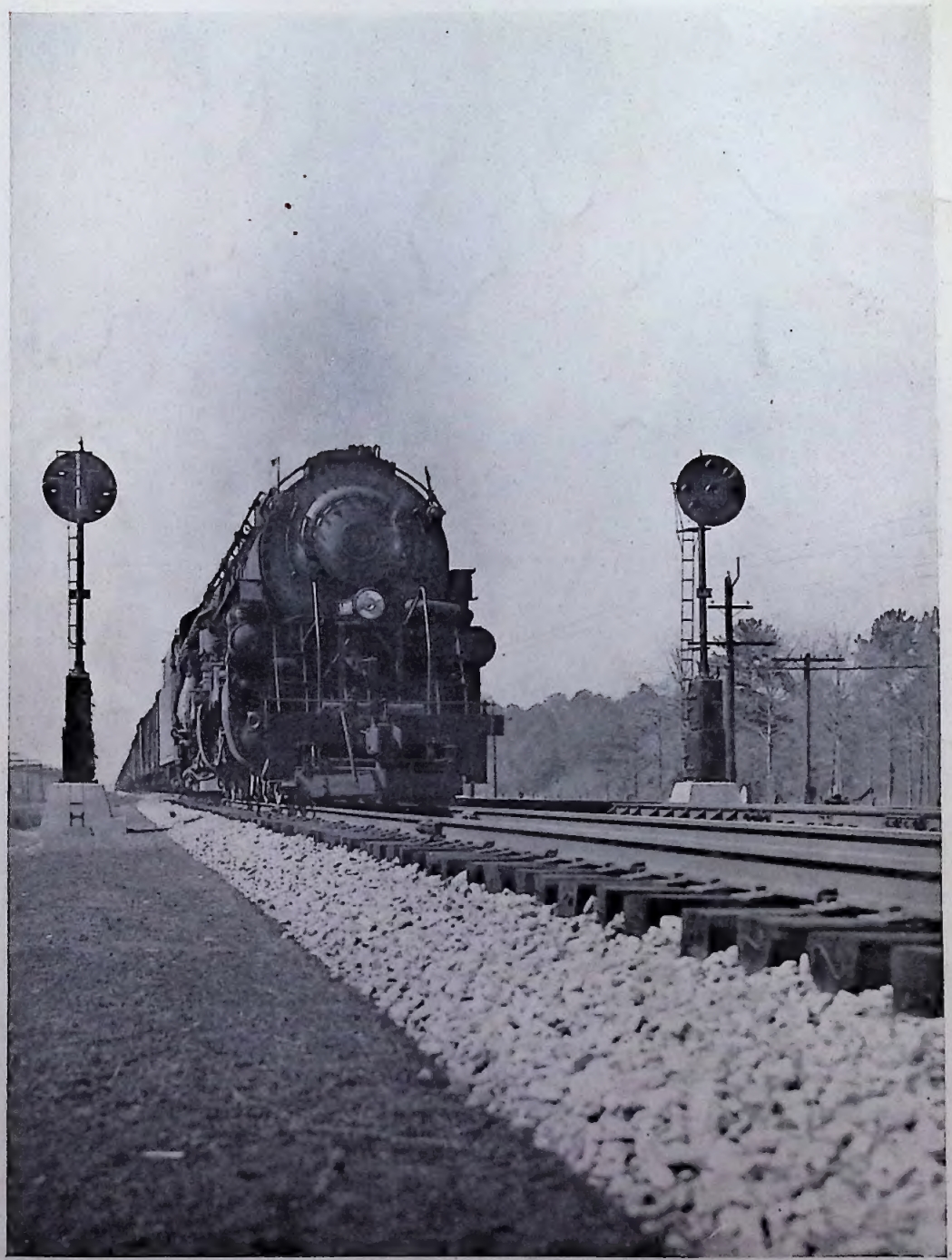
To meet the nation's needs, railroads every day are called upon to haul enough coal to make a train 150 miles long.

No other form of transportation could come close to handling so great a job so smoothly or economically. All by itself the movement of the nation's No. 1 fuel from mine to consumer would be a notable accomplishment. But at the same time, the food you eat, the clothes you wear, most of the things you use every day—and most of the supplies for the nation's factories—flow with the same smoothness—by rail.

No wonder thoughtful people recognize the railroads as the nation's No. 1 transportation system—not only in the volume they handle, but in the skill with which the job is done.

***SEE AMERICA*—by Rail**—You can take your car along too
NOW—TRAVEL ON CREDIT
See your ticket agent about Grand Circle Tour!

ASSOCIATION OF AMERICAN RAILROADS
WASHINGTON, D. C.



Courtesy Norfolk & Western.